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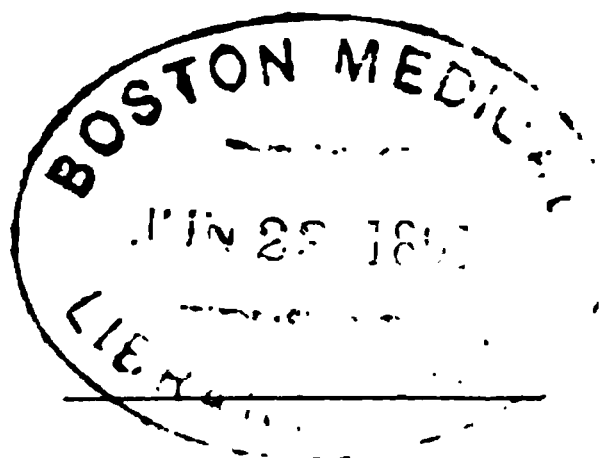
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OF
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A
MONTHLY REVIEW OF DENTAL SURGERY.



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SPECIAL NOTICE.

The Treasurer begs to call the attention of those Members who are still in arrear with their Subscriptions, to the following Bye-law:—

5. Any Member failing to pay his subscription before December 31st, shall cease to exercise the privileges of Membership, and if the subscription be not paid by December 31st of the next following year he shall cease to be a Member, and be ineligible for re-admission until all arrears due on ceasing to be a Member shall have been paid. A Member wishing to withdraw from the Association shall give a written notice to that effect to the Hon. Secretary before the 1st of January, on which his subscription becomes due.

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THE JOURNAL

OF THE

BRITISH DENTAL ASSOCIATION

A

MONTHLY REVIEW OF DENTAL SURGERY.

No. 1.

JANUARY 15, 1887.

VOL. VIII.

The Old Year and the New.

THE year that has just passed away has been in many respects one of exceptional interest to the dental community, and a retrospect of our gains and losses during the past twelve months will, we think, show that we have every reason to indulge in a certain sense of satisfaction; not indeed, the sort of satisfaction that leads people to rest on their oars, but rather the wholesome pride that leads to still more vigorous efforts. It may safely be said that at no previous period of the long struggle for dental reform, has our profession—its interests, its aims, its progress and its prospects—attracted so large a share of attention from the

outside public as during the past year, and it is not easy to overrate the importance of this fact. The Press is the reflector of public opinion, and as soon as a matter is generally recognised as being of public importance, the Press must discuss it. Now during 1886, most of the leading daily papers, and a good many weekly ones, have devoted leaders to the discussion of dental affairs, in some shape or form, and we may therefore assume that dental science and art have at last come to be widely recognised as a matter of public importance, and a not inconsiderable item in the great department of Public Health. Those who fathered, fostered, and fought for dental reform, and bore the heat and brunt of the conflict, displayed great foresight and admirable patience in their proceedings. They saw that two things were absolute essentials to any plan that should eventually rescue the profession from the miserable state in which they found it; these two things were education and organisation: beginning with the first, they founded the diploma, educated a generation of dentists, and then founded the Association and organised them. The result of the existence of a large body of educated professional gentlemen in a state of thorough organisation, working together and constantly increasing in numbers and efficiency, has naturally been the education of public opinion, and its expression by the public press; and dentistry has at length taken a firm and acknowledged place among the recognised necessities of civilised life.

Another of our leaders has received from Her Majesty the honour of knighthood—the veteran President of the Association has become Sir John Tomes; and this testifies as much as anything to the fact that we stand on a much higher level than we did when this same veteran began to fight our battles some forty years ago. On every hand the parent profession of medicine is welcoming us as

professional kinsmen, and we have last year had the pleasure of recording many new appointments to general hospitals throughout the country. In February we announced the appointment of a dental surgeon to the Radcliffe Infirmary at Oxford, and in this very number we elsewhere recount the initiation of a similar appointment at Cambridge. The Public Schools, the Army and Navy, are waking up to a consciousness of their "parlous" state, and have already done something, and are going to do a great deal more; and truly these departments are not likely to have a quiet time till something has been done. Messrs. Fisher and Cunningham have gained the public ear; they have, moreover right on their side and indomitable energy of purpose, and there is ample evidence that the pamphlet we are issuing, containing their papers and discussions, will not long remain barren of fruit.

The affairs of the Association have progressed steadily during the past year. A new Branch has been established in the Southern Counties, with Mr. Alderman Rymer as President, and Mr. Dennant, of Brighton, as Secretary; and as new branches mean new strength and vigour, and a wider spread of our principles, we are so much the stronger for this latest addition to our family. The Southern Counties is not, however, destined long to rank as our youngest offshoot, for we hear rumours that before long our fellow-workers in Ireland will succeed in establishing a branch in Dublin.

During the year, the Association has been compelled to prosecute three individuals for offences against the Dentists Act, and each prosecution has been conducted to a successful issue. Each of these cases has illustrated a special point in the Act, and created a precedent rendering such cases simpler for the future. The present condition of the Association is such as to render legal proceedings

highly unadvisable, and it is of the greatest importance that every case undertaken should be a typical one and simplify the future working of the Act. While we are discussing the subject of legal proceedings, it will be as well perhaps to point out a few facts in this connection which we have reason to believe are not fully appreciated by some of our provincial friends. Firstly, it is of the highest importance that in any legal action the Association may take, or may be called upon to defend, there should be no suspicion of 'animus,' seeing that there is nothing so prejudicial to the soundest case as the insinuation of motives of private professional jealousy and rivalry. Judges simply administer the law and juries are composed of laymen who do not view advertising and quackery from our point of view, nor do they comprehend or care much for the intricacies of professional etiquette; but they do understand very clearly the envy and malice of the unsuccessful against the successful in all walks of life, and therefore the suggestion that the Association had been put in motion by a rival practitioner might go far to ruin an otherwise unimpeachable case. Secondly, the Association is bound to observe some degree of caution in spending its money, and when money is spent upon a case the executive always desire, in the interests of the entire body which they represent, to select a case in which not only they may win, but the victory may prove a distinct gain in the establishment of a precedent and defining and clearing up an obscurity.

The progress of the Association has been accompanied by an increased demand for the Journal, and the publishing Committee have the gratification of recording a very substantial increase in the circulation, for we are now printing one-third more copies than we printed in the December of 1885, and this will not be sufficient for the

year 1887; moreover there has been an increase in our advertising pages, although this department is far from what we hope to see it soon.

Another pleasant feature in the record of the past year, is that among the authors of original communications to our pages, we find the names of several distinguished men of science outside our own branch of the profession, notably Dr. George Johnson, Mr. Watson Cheyne, Dr. Urban Pritchard, Dr. Frederic Hewitt, Mr. Wright Wilson and Mr. Tosswill and others; and at the same time the developing activity of our branches is constantly increasing both the quantity and the quality of the original matter supplied to us from members of our own body, and our projected scheme of special correspondence will no doubt add to the interest of the Journal. It is a matter of no small difficulty to conduct the Journal of the Association in such a manner that it may fairly represent the views of the majority of the members; it is very natural that sections and individuals should often fail to understand that their own view may not be the generally accepted one. Our branches and members have, however, shown exemplary forbearance and patience in the necessary differences of opinion that must arise from time to time, and the Publishing Committee have endeavoured and will continue to endeavour to meet the views and express the wishes of the branches in all directions.

The success of the Annual General Meeting is a matter of too recent date to require notice here; suffice it to say, it surpassed the expectations of the most sanguine of us.

During the past year a new dental journal has made its bow to the public in America, it is called the Dental Review, and is we believe conducted by a gentleman with whose name we are most of us familiar, Dr. Harlan. The two numbers already published are excellent, and we hope

our new contemporary has a long and prosperous future before it.

Before we close the record of 1886, we must allude to two severe losses that the world of science has suffered during the past year. Two men of world wide reputation, Dr. Austin Flint and M. Paul Bert, have been cut short in the midst of their labours and in the prime of their intellectual strength, and in them science has lost two of her most assiduous and indefatigable votaries.

There is no knowing what the future may bring forth, but we do not think we are making too bold a prophecy when we assure our members that next August has in store for them a genial welcome at Glasgow. Edinburgh has already received the Association, and the prosperous and growing West of Scotland Branch will not be behindhand in hospitality, social and intellectual. Mr. Brownlie, who is to hold the office of President, has established for himself a position which needs no comment at our hands; his recent address shows that he will be a very wise and capable guide, and we cannot fail to hear something worth remembering from him. As time goes on we shall be able to give fuller particulars, and we will content ourselves now with expressing our desire to place as much space as possible at the disposal of the Executive to assist them in making public their plans.

After the meeting at Glasgow some of our number (we hope a good many) will cross the Atlantic to take part in the International Medical Congress, to be held at Washington. There is no doubt that the reception that will be accorded to us by our transatlantic friends will be worthy of the American nation, and many of us will return wiser and certainly not sadder men.

ASSOCIATION INTELLIGENCE.

Election of New Members.

At the last Business Meeting the following gentlemen were elected Members of the Association, Messrs. Stanley Cook, L. M. Fagg, W. A. Maggs, Joseph Rogers, W. R. Stuck, London; T. M. Brown, Glasgow; G. Holt, Bury; F. M. Howkins, Guernsey; J. Taylor, Warrington; and the names of Messrs. G. O. Richards and W. Palethorpe, Birmingham, were received as having been elected by the Central Counties Branch; the name of Mr. S. T. Greentree, York, by the Midland Branch; and the name of Mr. W. S. Gillespie, by the West of Scotland Branch.

Central Counties Branch.

A MEETING of the above Branch of the British Dental Association was held at 71, Newhall Street, Birmingham, on Thursday, December 9th, the President, Mr. Breward Neale, in the chair. There were present Messrs. S. Birt, F. Huxley, F. W. Roberts, J. S. Crapper, C. Sims, W. R. Roberts, F. H. Goffe, G. D. Orrock, W. Palethorpe, G. Richards, F. W. Richards, Madin, Wilson, E. Sims, F. Matthews, and Drs. Gosling and Vinrace.

Mr. Lawson Tait, the distinguished President of the Gynæcological Society, and Dr. Chavasse, were elected Associates of the Branch.

A very interesting paper was read by Dr. CHARLES GOSLING, Administrator of Anæsthetics to the Dental Hospital on the Administration of Anæsthetics, describing thoroughly the advantages of nitrous oxide, ether, and chloroform, and the attendant risks of each. The paper was of a very practical character, and was much appreciated.

A discussion followed, in which Mr. Roberts, of Dudley, and Mr. Breward Neale took part.

Subsequently the discussion upon a paper, read by Mr. CHAS. SIMS, at the last meeting upon the "First Permanent Molar" was resumed, in which Messrs. Humphreys, Richards, Sims, and Neale, took part.

Messrs. Barth & Co. kindly sent down on exhibition the most recent forms of apparatus for the administration of gas and ether.

The next meeting will take place on Thursday, February 3rd, 1887.

West of Scotland Branch.

THE usual Monthly Meeting of the West of Scotland Branch, was held on Thursday, December 23rd, in the Faculty Hall, St. Vincent Street, Glasgow, W. R. Brownlie, L.D.S.Eng., President, in the Chair.

A communication was given by Mr. J. S. AMOORE, L.D.S.Eng., of Edinburgh, on the "Dental Anatomy of some of the Invertebrates." The paper was one of great interest, and was illustrated by diagrams, dissections, and a large number of microscopic specimens. Questions and remarks on the paper were made by Messrs. W. S. Woodburn, Jas. Cameron, D. Woodburn, J. Melville, and the Chairman.

Mr. Dale, of Glasgow, shewed an ingenious cuspador, and vulcanizing flask, both of his own design.

A vote of thanks to Messrs. Amoores and Dale, closed the meeting.

The next meeting will be held on Thursday, January 27th, in the Faculty Hall, St. Vincent Street, Glasgow, at 8 p.m., when Mr. W. S. Woodburn, L.D.S.Glasg., has kindly undertaken to open a discussion on the subject of "Cocaine, and its Use in Dental Surgery."

Midland Branch.

AN open meeting of Members and Associates will be held on Saturday, February 5th, at six o'clock, in Room No. 14, Y.M.C.A., Peter Street, Manchester. The Secretary will make a short communication on "Gutta Percha as a Filling Material," and other communications are invited.

The Council will meet at 3.30.

W. H. WAITE, *Hon. Sec.*

The Benevolent Fund.

THE following new Subscriptions and Donations to the Benevolent Fund of the British Dental Association, have been received by the Treasurer since June 1st, 1886 :—

	Subscriptions.
Amoores, D. W., 8, Warrior Square, St. Leonards-on-Sea	£1 1 0
Amoores, J. S., 7, Abercromby Place, Edinburgh	0 10 6
Ackery, John, 24, Queen Anne Street, Cavendish Square, W.	1 1 0
Andrew, John, J., 2, Belgravia, Belfast	0 10 6

BRITISH DENTAL ASSOCIATION.

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Subscriptions.

Balcombe, Thos., Pembroke House, St. Mark's, Jersey ...	0	10	6
Bailey, J. J., Portland House, Guildford, Surrey ...	0	10	6
Bennett, F. J., 28, George Street, Hanover Square, W. ...	1	1	0
Coxon, S. A. T., 4, York Row, Wisbech ...	0	10	6
Dewes, N. W., 10, Cavendish Place, W. ...	1	1	0
Davis, Charles D., 9, Lambert Road, Brixton Hill, S.W....	0	10	6
Gaine, Charles, 30, Gay Street, Bath ...	0	10	6
Gardner, Charles, Ivy House, Barton Street, Gloucester...	0	10	6
Gavin, Martin, 5, Manningham Lane, Bradford ...	1	1	0
Hatch, R. M., Claremont House, Clifton, Bristol (<i>increased from 10s.</i>) ...	1	1	0
Hepburn, David, 9, Portland Place, W. ...	0	10	6
Neale, W. H. Breward, 7, Newhall Street, Birmingham...	1	1	0
Read, Lawrence, 18, Hanover Street, W. ...	0	10	6
Read, H. G., 30, Finsbury Square, E.C. ...	1	1	0
Reinhardt, J. H., 384, Brixton Road, S.W....	1	1	0
Sykes, Miss Grace, 36, Sackville Street, W. ...	1	1	0
Smith, Alfred, 52, Parkhurst Road, Holloway, N....	0	10	6
Torpey, Geo., 120, Gower Street, W.C. ...	1	1	0
Tod, E. M., 9, Old Steine, Brighton... ..	1	1	0
Tracy, Humphrey W., 6, Hatter Street, Bury St. Edmunds	1	1	0
Underwood, Thos., 11, Bedford Square, W.C. ...	0	10	6
Underwood, A. S., 11, Bedford Square, W.C. ...	0	10	6
White, Thos. Charters, 32, Belgrave Road, S.W. ...	1	1	0
Williams, E. Lloyd, 2, James Street, Buckingham Gate, S.W.	0	10	6
Wheeler, J. Cornelius, Fitzclarence House, Southsea ...	1	1	0

Donations.

Ackery, John, 24, Queen Anne Street, Cavendish Square, W.	£5	5	0
Brunton, Geo., Hillary Mount, Woodhouse Lane, Leeds (<i>in addition to Subscription</i>) ...	1	1	0
Bayfield, C. Moulder, 9, Talbot Road, Westbourne Park, W. (<i>in addition to Subscription</i>)...	0	10	6
Balding, Edmund, Cheddon House, Upper Holloway Road, N. ...	0	10	6
Burt, W., 1, Frederick Place, Weymouth ...	1	1	0
Carter, J. H. and Sons, 26, Park Square, Leeds ...	2	2	0
Eastern Counties Branch of the British Dental Association	10	10	0
Hepburn, Robert, 9, Portland Place, W. ...	10	10	0
Kluht, H. J., 44, Norfolk Terrace, W. (<i>in addition to Subscription</i>) ...	1	1	0
Longhurst, Sidney, 28, Old Burlington Street, W (<i>in addition to Subscription</i>) ...	0	10	0
Mummery, J. Howard, 10, Cavendish Place, W. (<i>in addition to Subscription</i>)...	5	0	0
Smith, Edward J., 474, New Cross Road, S.E. ...	2	2	0
Thomson, W. Scott, 22, George Street, Hanover Square, W.	2	2	0

					Donations.
Whittle, Dr. E. G., 65, Dyke Road, Brighton	...	...	...	...	£0 10 0
White, Richard Wentworth, St. Giles's Street, Norwich (<i>in addition to Subscription, being the Surplus returned of the amount guaranteed by him for the expenses of the B.D.A. Meeting at Cambridge</i>)	...	...	...	...	3 17 2

The Treasurer begs to remind the Subscribers to the Benevolent Fund that their Subscriptions for the current year are now due; and he will be obliged if they will spare him the trouble of making a personal application. All letters should be addressed to A. J. Woodhouse, 40, Leicester Square, London, W.C.

ORIGINAL COMMUNICATIONS.

On the Treatment of Alveolar Abscess.*

By W. GRAYSTON, L.D.S.I.

WE are all of us aware that thousands of teeth are annually extracted, the loss of which is of serious moment to their once happy possessors. The extraction of certain teeth is often necessary for the correction of irregularity, the prevention of overcrowding, &c. But the indiscriminate removal of pulpless and abscessed teeth cannot be too strongly discountenanced. The ignorance of the public, and their willingness to pay higher fees in proportion for artificial work than for conservative operations, is, I am aware, a great temptation to many to neglect the higher for the more profitable branch of the profession; but all who really have the best interests of our calling at heart, will, by availing themselves of every opportunity of obtaining knowledge, and by practising conservative dentistry to the utmost of their abilities, so educate their patients that they will realise the value of their teeth, and by appreciating the importance of our services, gain for our profession a high place in public esteem. What little experience I have had teaches me that patients readily submit to any operations that may be thought necessary, providing the operator is quietly determined to do what is right, and will, by entering into necessary explanations, show that he knows what he is about. In the preservation of abscessed teeth, great progress has been made of late years, owing principally to the attention given to antiseptic treatment, and the discovery of many new remedies, which have so simplified

* Read at the Annual General Meeting of the Association, August, 1886.

this once tedious and uncertain operation, that I hope the day is not far distant when the extraction of an abscessed tooth (for this reason alone) or the leaving of permanent vent-holes in teeth, will be as rare as is now the use of the key for their removal.

Into the pathology of alveolar abscess I will not now attempt to enter; for as Dr. Taft says in his work on Operative Dentistry, a thorough knowledge of it, or even an understanding of the *rationale* of its treatment, involves a very wide range of pathological research. I will only endeavour, as briefly and as simply as I can, to give my experience with some of the more recently used antiseptics, in the hope that those who have not already done so, may be induced to give them a trial. The most efficient and reliable remedy that I have used in the treatment of "abscessed teeth," is peroxide of hydrogen.

It can hardly be considered a new antiseptic, for I believe it was discovered by a French chemist in 1818, and introduced here by Dr. Richardson in 1858. Its use in dental operations is, however, of quite recent date.*

I have used it regularly for the past two-and-a-half years, and have found that if properly applied a complete cure is rapidly effected in nearly every case.

The first step in the treatment is to so gain access to the pulp canal or canals that freedom of manipulation is obtained without undue sacrifice of tooth structure.

This in the majority of cases can best be obtained through the cavity of decay, though it is sometimes far better to drill directly through sound tooth-structure. An opening made through the crown of a molar or the lingual surface of an incisor is, for instance, preferable to unduly extending an approximal cavity. Decay should be removed from the cavity so that the white walls will reflect light and the parts be brought better into view. Loose debris is syringed out with warm water and the putrid contents of the canals removed with pulp extractors or with cotton wool wound round a suitable instrument.

Peroxide of hydrogen is now introduced by means of shreds of ordinary cotton wool, wound tightly round an old pulp extractor or one of the new Donaldson canal cleansers of suitable size. The

* Introduced by Dr. Richardson as a medicine; as an antiseptic in dental surgery by Dr. Walter Coffin at the International Medical Congress, London, 1883.

barbs hold the cotton firmly in place and prevent its being accidentally left up the root. After each withdrawal the cotton on the instrument is wiped clean and dipped again in the medicament. In an astonishingly short space of time the wool will come away quite clean and all trace of bad odour will have entirely disappeared.

The antiseptic should now be pumped through the foramen at the apex of the root, using the broach wound round with cotton as a piston to force it through. Peroxide of hydrogen possesses the peculiar property of frothing when brought into contact with pus, and this, therefore, forms a correct and certain diagnosis. When there is no visible discharge of pus, but this froth proves its presence, the medicament should be pumped through the apex for five or ten minutes, and the canal then filled with iodoform paste (Dr. Flagg's formula), and the cavity of decay with cotton and mastic or gutta percha.

In from two to three days the patient should return, and it will often then be found that the absence of pus proves the case cured.

When there is a visible discharge of pus I generally continue the pumping for a longer time, and unless there is a fistulous opening through the gum the canal is left open to allow free drainage, a ball of cotton wool being placed somewhat loosely in the cavity of decay to prevent ingress of food particles. When at a subsequent sitting, on pressure being applied to the gum no pus exudes down the canal, the root can be filled with iodoform paste, and the cavity sealed more tightly. The case is to be considered cured when on pumping the peroxide of hydrogen through the foramen it no longer froths.

From one to six visits will effect a cure in the majority of cases, and I do not know, so far, of one single case that, having been dismissed as cured, has required any further attention.

There will be little or no pain caused by this treatment, unless the discharge of pus is prevented by sealing up the cavity too soon, or soreness induced by too vigorously passing the instrument right through the apical foramen. Peroxide of hydrogen rapidly loses its properties on exposure to light, heat or air. Care should therefore be taken to purchase from a fresh stock, and to keep it in a dark well-stoppered bottle, and as much away from the light as possible, and to pour out the required quantity each time of use.

This treatment is applicable to all roots into which the instrument wound round with cotton can be introduced and used as a piston. The few cases that resist the treatment can, as far as my experience goes, only be cured by an operation.

Operative treatment, as is well known, consists in thoroughly breaking up the abscess by cutting away the diseased parts. This was formerly very painful as I unfortunately know from personal experience, but now, thanks to the discovery of cocaine, it can be performed practically painlessly.

An application to the gum for a few minutes enables the needle of a hypodermic syringe to be inserted, and a few drops of the local anesthetic injected into its tissue without causing the patient any inconvenience.

After waiting a short time a burr, rotated in the dental engine, can be painlessly passed through the alveolar process, either following and enlarging a fistulous track, or cutting directly through gum and alveolus. Some slight sensation is generally felt when the burr gets through the process, and as the patient has been instructed to give immediate notice of this, the instrument is at once withdrawn and more cocaine injected into the opening.

In from three to five minutes the burr can be re-introduced, the end of the root trimmed, and the diseased parts on and around it removed quite painlessly. The wound thus made should be syringed out regularly for a few days with peroxide of hydrogen, and (unless loose particles of bone remain in) will usually readily heal.

When the root canals are so fine that it is impossible to satisfactorily pump up peroxide of hydrogen, I do not attempt to enlarge them, preferring to follow the treatment described by Dr. Eldred Gilbert, in the *Dental Cosmos* of January 1st, 1884. It is intended to be applied to cases where there is a fistulous opening; but if this does not exist, it can be produced by application of hot figs, or capsicum plaisters, or by cutting through the alveolar process to the end of the root.

In describing it I will use Dr. Gilbert's own words:—"Having cleansed the canals as thoroughly as possible, they are wiped out with iodoform paste. Formula:—

R. Iodoform	...	...	...	gr. xxx
Tannin	...	...	...	grs. i. to iii.
Glycerine	...	...	...	3 ss
Oil of Cloves	...	...	...	part of a drop.

The canal is then filled with the inspissated paste, the formula of which is :—

R Acetate of Morphia }
 Sulphate of Lime } aa gr. x
 Glycerine, Q. S. M.

A guard ball of cotton is placed in the bulbous portion and the cavity tightly filled with a temporary stopping. This remains until the tooth is in a healthy condition, and the fistula healed, when a part of the stopping is removed, but none of the paste, in the canals. With this treatment the tooth seldom becomes sore, or if it does it soon passes away. The cause of the abscess and fistula having been removed, the parts readily heal. This method has proved so successful in my own practice that I have been surprised at the results. It is not so certain nor so rapid as the treatment by peroxide of hydrogen, but for these fine canals it has given me better results than any other treatment with which I am at present acquainted ; and when it fails I resort to the operative treatment already alluded to.

Gentlemen, I have endeavoured to describe methods of treating abscessed teeth, which have relieved me from much anxiety, and, I think, gratified my patients.

I thank you most sincerely for the patience with which you have listened to me, and in conclusion, I have only to add, that besides the usefulness of treating abscessed teeth so that they can be preserved by subsequent filling, there is now quite a new field being opened in this direction owing to the growing practice of retaining crownless roots as a firm foundation for artificial substitutes inserted in the usual manner, and also as attachments and supports for crown, bar, and bridge work ; and it goes without saying that these roots to be of any service must be properly treated and filled.

Public Appointments in Relation to Dental Surgeons, and the Methods in which they are conferred.*

By W. G. GORDON JONES, L.D.S.I.

MR. PRESIDENT AND GENTLEMEN,—As this is the first occasion I have had the honour of reading a paper before the learned members of this Association, I must crave their indulgence for this my maiden effort. Being anxious to have this subject thoroughly

* Read at the Annual General Meeting of the Association, August, 1886.

discussed, and feeling sure that papers written at great length are likely to become irksome and to trespass too much on the patience of members, I have decided not to err in this respect, but to confine my observations in furtherance of the reform I consider necessary in conferring appointments, where vacancies arise in public hospitals and institutions. From evidence I have in my possession, I regret that appointments are conferred on members of our profession, who, instead of endeavouring to raise the status of their profession, degrade it by resorting to unprofessional actions, which I think you will all agree with me, ought to be discountenanced by the medical staff of the hospital or institution the individual is appointed to. Taking for granted, that with the increase of population and advancement of the science of dental surgery, greater competition must be experienced by all those practising in, and about to enter the practice of, this profession, no excuse should be permissible for the recipient of an appointment to any hospital or institution to make it the medium of advertisement in pamphlets or bills, similar to those displayed by drapers when a sale of their goods takes place at the termination of the London season, or by weekly announcements that a dental surgeon attends at an institution, hospital, or infirmary, on particular mornings in the week, at particular times, such announcements being inserted in all the local papers and continued for years. I can quite understand it is an advantage to intimate when a certain physician and surgeon out of a large staff in a country town attends this or that hospital, infirmary, or institution, because patients have been accustomed to receive treatment or advice from a particular physician or surgeon, and consequently have confidence in his advice and treatment; but where a dental surgeon has received an appointment (even though it may sometimes appear necessary to announce it in order that the working classes and deserving poor may avail themselves of such services), I maintain that a limited period should be enforced—say one year, and then such intimation be withdrawn, for in small country towns it would be generally known during that period of time. The object of a charlatan's position is greatly strengthened by including in his advertisements that he is dental surgeon to certain hospitals or institutions. The public think then he must be a reputable practitioner, and this is due to the fact, that although we are living in a more enlightened age, certain sections of the public believe in adver-

tising ; consequently, in my opinion, no appointment should be conferred without the candidate is in possession of an English, Scotch, or Irish diploma. Very often appointments are conferred without a due regard to that publicity they undoubtedly claim ; The consequence is, that many deserving individuals are excluded from fair competition. This system is more likely to alienate members of the profession, than to further cement that *esprit-de-corps* we are all so anxious to see thoroughly established. One thing is certain, and that must be clear and palpable to all—that influence has very often greater sway than ability in the fulfilment of appointments. It has been the case from time immemorial, but why it should still prevail in this enlightened age, I, for one, fail to understand. Is it because the profession owes a debt of gratitude to the father of the accepted candidate, and signalises its appreciation of his services by conferring the vacant appointment on his son, to the exclusion of men more fitted to fill the vacancy ? I fear it is too frequently the case, and the aspirant to fame and an honourable position in his profession is thus severely handicapped, who has perhaps received as good a general education, but has had to rely on his own efforts for his position, possibly owing to losses parents frequently experience, and are on that account unable (although they have educated their sons with the intention of taking the highest qualifications in their profession), to carry out their original intentions. That more encouragement should be given to examples similar to instances of this kind, you, I believe will with me agree, is necessary. There are members of the profession whom I could quote, who are good friends in this respect, but there are others not sufficiently liberal in thought to take example by them. Let us hope, however, that the noble object in view when this Association was formed, will be achieved, and that a better spirit will be engendered amongst members of this special branch of surgery.

APPOINTMENTS.

FRANK HARRISON, M.R.C.S., L.D.S., has been appointed Demonstrator on Practical Physiology to the Sheffield School of Medicine, *vice* R. J. Pye Smith, F.R.C.S., resigned.

GRENVILLE JONES, L.D.S., R.C.S.I., has been appointed Honorary Dental Surgeon to the Ruabon Cottage Accident Hospital.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

The Odontological Society of Great Britain.

THE usual monthly meeting of this Society was held at its rooms, 40, Leicester Square, on the evening of Monday the 6th ult., Mr. T. CHARTERS WHITE, President, in the chair.

After the reading of the minutes, Mr. ARNOLD ROGERS rose and asked to be allowed to express his thanks to the friends who had subscribed for the portrait presented to the Society at the previous meeting, and to thank the Society for the honour it had conferred upon him by accepting it and giving it a place amongst the portraits of those who had worked for the advancement of the profession. On reading Mr. Parkinson's kind words when he made the presentation, he (Mr. Rogers) feared that the Treasurer had allowed his friendship to outrun his usually calm judgment. It seemed to be an amiable peculiarity of the dental profession, that not only did it confer on its favourites all the honourable posts in its gift, but it continued to honour them still more for having accepted these distinctions. He thanked them very sincerely for their kindness.

A letter from Mr. Ibbetson was read by the SECRETARY, acknowledging the compliment which had been paid him by electing him an honorary member of the Society. As one of its founders he regarded with justifiable pride the high position which it had attained and the signs of its continued progress, and he highly valued the distinction which had been conferred upon him.

Mr. J. H. MUMMERY exhibited a series of models showing the progress of a somewhat difficult regulation case, and also the apparatus which had been used. The patient was a very delicate girl, aged fourteen, who had lost all her upper molar teeth owing to repeated severe attacks of periostitis. The absence of these teeth, together with the bad state of the patient's health, made the case rather a troublesome one to treat, but a very satisfactory result was obtained in a little over twelve months by the following means. A gold plate was made capping the first bicuspid and carried back along the alveolar ridge on either side, terminating in a hook to which was attached a rubber ring. This ring was passed round the second bicuspid on either side, and held down by a catch on the plate midway between the tooth and the point of attachment of the ring, thus securing horizontal traction on the tooth. The

second bicuspid having been drawn back they were capped, and the same apparatus brought to bear on the first bicuspid, from which the capping was removed. The required space having been obtained, the other teeth were brought into line by means of a vulcanite plate with piano wire bands.

Mr. Mummery also showed a very convenient electric light and battery for examination of the mouth, made by Messrs. Meyer and Meltzer, of Great Portland Street. It was very compact and portable, and required but little attention.

Mr. W. HERN read notes of a case of diplopia and supra-orbital neuralgia, caused by dental irritation.

The patient, a man, aged fifty-six, applied to Mr. Lawson, at the Ophthalmic Hospital, Moorfields, in July last, on account of diplopia, which had come on five days previously. He also complained of severe pain about the left frontal eminence. Paralysis of the left superior oblique muscle was diagnosed, and as an inspection of the mouth showed a carious upper molar on the left side and no other cause could be found, it was suspected to be due to dental irritation. He was, therefore, advised to go to the Dental Hospital of London. When he presented himself, on August 3rd, Mr. Hern found that all the teeth were sound, except the upper second and third molars on the left side. The second molar had a large distal cavity exposing the pulp, the third a small mesial cavity only. The patient complained greatly of the supra-orbital neuralgia, which, he said, deprived him of sleep. The second molar was extracted, and the cavity in the wisdom tooth filled with gutta percha. The patient came again the following week and reported that he had been quite free from pain, but that the diplopia continued. After a time, however, this began to be less marked, but on October 29th he still had double vision on looking downwards, though there had been no return of the pain.

Mr. HUTCHINSON said the case corresponded very closely with one which he had reported to the Society a few months ago, though the motor nerve affected in his case was the third, whilst in Mr. Hern's it was the fourth. In his case, as in Mr. Hern's, the neuralgia disappeared directly the offending tooth was removed, but the spasm of the levator palpebræ continued for more than six months afterwards. It, however, gradually disappeared, and he thought a similar satisfactory result might be looked for in Mr. Hern's case.

Mr. NEWLAND PEDLEY thought that it was rather too much the fashion at the present time to see connections between dental and ophthalmic troubles. Considering how common dental caries was, it was evident that it and diseases of the eye must often occur in the same individual ; but even if the eye disease got better after the extraction of some stumps, it did not necessarily follow that the two things were cause and effect ; *post hoc* was not necessarily *propter hoc*. He instanced the case of a girl who came complaining of pain in one eye and loss of vision. Amaurosis was diagnosed, and dental irritation supposed to be the cause. Several stumps were extracted, and the sight was much improved. She was then sent to an ophthalmic surgeon, who tried a number of glasses without any apparent benefit, until he placed a very strong lens in front of the sound eye. The patient then declared she could see quite clearly, and it was evident that it was a case of hysteria or malingering.

Mr. HUNT (Yeovil) thought it must be the experience of all dental practitioners that ophthalmic troubles did constantly clear up after the extraction of bad teeth. Such cases as those reported by Mr. Hutchinson and Mr. Hern might not be very common, but other forms of functional trouble, such as failure of accommodation, &c., were common enough. He thought that the experiments of Von Hippel and Grunhagen, referred to by Mr. Power, showing that stimulation of the fifth nerve increased the intra-ocular pressure to an amount represented by several inches of mercury, was clear proof of the intimate connection which Mr. Pedley appeared to doubt.

Mr. F. J. BENNETT said he did not wish to throw any doubt on Mr. Hern's case, but he could not agree with Mr. Hunt's statement that such cases were common. In his experience they were very rare. He thought, moreover, that some of the reported cases of lesions of the eye, said to be due to diseased teeth, would scarcely bear investigation. For instance, a case in which he himself had been concerned, that of a girl who had an attack of iritis just after an upper central had been pivoted, had been repeatedly quoted at the Society's meetings, as one in which the connection was proved. Yet Mr. Lawson, who had treated the case, gave a decided opinion that there was no such connection as was asserted, and he thought that the opinion of a specialist with a large experience of eye diseases, was entitled to great weight. It was admitted that these lesions did not disappear at once on the

removal of the tooth, and this seemed to tell against the assumed connection.

Mr. HUTCHINSON thought that if those who doubted the connection between diseases of the eye and those of the teeth, would study the paper on this subject, read before the Society by Mr. Henry Power about two years ago, they could not fail to be convinced. And Dr. Walker remarked that he had conversed with Mr. Power that afternoon on that very subject, and that he had stated that since reading the paper several very clear cases had come under his notice, strongly confirming the opinions he had then expressed.

Mr. REDMAN (Brighton) mentioned the case of a girl aged twenty-two, who was sent to him with a large abscess about the angle of the jaw, which had opened externally, the jaws being fixed by the inflammatory exudation. Mr. Redman separated the teeth sufficiently to ascertain that the trouble was caused by an impacted wisdom tooth; but in order to get at this he was obliged to extract the second molar. The abscess then closed, but severe neuralgia set in. He then removed the roots of the first molar, but without any relief to the patient, and he had come to the conclusion that the pain was due to pressure on some nerve filament which had become involved in the cicatrix; but he could not induce the surgeon who was attending the patient to do anything further.

Mr. HUNT exhibited a model of the lower jaw of a lady aged forty, who had been wearing upper and lower plates for some time. The latter gave her some pain, so she put some cotton wool under it to ease the pressure. This she continued to do, gradually increasing the amount of wool until, as shown by the model, the whole of the alveolar border on both sides of the mouth had been absorbed. He also mentioned a case in which a lady had separated two lower molars to such an extent by packing cotton wool between them, that he could put his thumb into the space.

Messrs. Willoughby Weiss, Walter Coffin, and the President all mentioned similar cases, which had come under their notice.

Dr. GEO. CUNNINGHAM (Cambridge) showed a model of an apparatus made by Dr. Rosenthal of Liège, for a patient who had had a considerable portion of the lower jaw removed on account of a sarcoma. The portion removed consisted of the ascending ramus and condyle, together with the body of the bone as far forwards

as the second bicuspid. As the result of unopposed muscular action, the other condyle became dislocated, and the jaw became quite useless. To enable the patient to eat, Dr. Rosenthal made two gold plates. One of these was attached by screws to the upper first bicuspid and first molar, the second bicuspid being absent. In this space was fixed a rod, inclined downwards and backwards. The lower plate was attached to the two bicuspids, and carried a tube, also inclined downwards and backwards, in which the pin from the upper plate worked; the latter was so long that it could not escape from the tube, however widely the mouth might be opened. By this means, the portion of the lower jaw which remained was kept in its proper position with regard to the upper teeth, and the patient was enabled to masticate with perfect ease. The apparatus had been in use about nine months.

Mr. STORER BENNETT commented on the case, and described a very ingenious apparatus, which he had made for a patient of Mr. Lawson's, who had lost a portion of the lower jaw owing to necrosis, &c. At the suggestion of the President, Mr. Bennett promised to exhibit the apparatus, and the patient also, if possible, at the next meeting.

Messrs. Hepburn, Henri Weiss, E. Lloyd Williams and the President also took part in the discussion on this case, and Dr. Cunningham replied.

The PRESIDENT called attention to about twenty specimens of jaw-bones found in a tumulus known as Bowlsbury, situated near Heytesbury, in South Wilts, sent for exhibition by Mr. William Cunningham, and gave a short description of them.

The custom of erecting mounds, or "barrows," over the resting-place of the dead, was a practice of almost universal adoption, as was shown by their existence in almost all parts of the world. In England two forms of barrow were recognised by archæologists, viz.: the round, and the oval or pyriform. The latter appeared to be of considerably older date than the former, though they might be found close together, and were thought to contain the relics of the earliest inhabitants of Britain of whom any sepulchral monuments exist. This opinion was based upon the fact that no weapons or implements of metal of any kind have ever been found in a "long" barrow, though weapons of bone and stone, especially leaf-shaped arrow-heads of flint, are occasionally met with; the pottery used by these people is also of the rudest kind, and quite devoid of ornament. The skulls from the primary interments in

these barrows are invariably dolicho-cephalic, or hyper-dolicho-cephalic, as seen in a specimen shown by Mr. Cunnington, whilst the round barrows are found to contain both brachy-cephalic and dolicho-cephalic skulls mixed, together with bronze implements, &c.

The tumulus in which the specimens then shown were found was 150 feet long, about 50 feet broad, and nearly 11 feet high; it was bounded on the sides by two ditches, which, however, did not extend round the ends, and from which the chalk of which the mound was chiefly constructed was obtained. On cutting across the mound it was found that its centre was composed of flints piled up in a long ridge about 5 feet high, and beneath this pile of flints the bones were found heaped together in the most promiscuous manner. Portions of the skeletons of at least fourteen persons were found, and more than half the crania had been cleft or violently fractured. It was the practice at those times when a chief died, to slaughter wives, children, and dependents, whose bodies were interred over or near to that of the chief. Thus amongst the specimens exhibited was the lower jaw of a child, probably about five years of age, with the first and second molars unerupted. The teeth in some of the other jaws had been worn down in the most extraordinary way. The teeth of some of the natives of India and other semi-civilised countries showed the same kind of wear, due in their case to the admixture of silicious particles with their flour, which they grind by hand between two gritty stones; and, no doubt, the erosion of these teeth was due to the same cause. Mr. White had carefully decalcified some small fragments of tartar removed from these teeth and examined the sediment. In this he found scattered grains of sand in great abundance, polarised light showing that some of these were silicious and some quartz or granite, together with altered and disintegrated epithelial scales, fragments of starch cells, portions of husks of corn, barblets of feathers, portions of wool and vegetable tissue, the point of a fishes' tooth, a diatom or polycystom, and other things, all found in the tartar of the teeth of the stone age, probably between 3,000 and 4,000 years old. Several of the specimens showed a considerable amount of absorption of the alveoli, and there was one giving evidence of alveolar abscess, but there was an entire absence of caries, a fact which served to confirm the statements of Mr. Mummery, Professor Rolleston, and others, who had carefully examined similar remains; whilst in the

jaws of skulls dating from the bronze age, caries was, according to these observers, far less rare.

Mr. D. HEPBURN showed some specimens of a similar character found in the west of Ireland, the age of which could not, however, be satisfactorily ascertained. Amongst them were the jaws of children of eight and eleven years old, together with those of adults and of elderly people. They resembled those sent by Mr. Cunningham in the perfect structure of the teeth and the entire absence of caries.

The PRESIDENT, having thanked the various contributors to the business of the evening, announced that the Annual Meeting for the election of officers, &c., would be held on the 10th prox., and closed the meeting.

Odonto-Chirurgical Society of Scotland.

THE First Ordinary Meeting of the above Society, Session 1886-7, was held in the Rooms, 30, Chambers Street, Edinburgh, on Thursday November 11th, 1886.

After some appropriate introductory remarks, the President, Mr. BOWMAN MACLEOD, called upon Dr. Symington to read the following paper :—

ON THE POSITIONS AND RELATIONS OF THE TEETH IN CHILDREN.

BY J. SYMINGTON, M.D., F.R.S.E.

Lecturer on Anatomy, School of Medicine, Edinburgh.

ONE of the principle objects of this communication is to direct attention to a method of investigation which appears to have been almost entirely neglected in the examination of the relations of the teeth in children, but which has proved of great value in the study of the topographical anatomy of other organs of the body. I refer to the plan of freezing the parts we wish to examine, and then making sections with a fine saw. I hope to be able to demonstrate, from specimens prepared in this way, several interesting points in the topographical anatomy of the teeth and jaws that appear to have been hitherto overlooked.

The position of the permanent teeth before their eruption, has been mainly investigated in the dried skull, the teeth being exposed by filing away the bone external to them. While specimens prepared in this way afford a connected view of all the teeth, they possess several obvious disadvantages. For instance, by the removal of the soft parts, some important relations of the teeth are lost. Again, there is considerable danger of those teeth that happen to be only partially calcified, shifting their position in consequence of the drying up of the soft pulp, and owing to the manipulative procedure adopted in exposing them. On the other hand, by freezing the undissected head and

cutting it up into thin slices while frozen, we retain the soft parts in their natural position, and obtain beautiful sections of the teeth, even though they are only slightly calcified. Such sections also show, much better than ordinary dissections, the relations of the teeth to the neighbouring cavities, and the relative positions of the teeth of the upper and lower jaws.

FIG. 1.

The first preparation I propose to describe is a transverse vertical (coronal) section of the head of a child about two months old (see fig. 1 which is a life-sized drawing. In it the cavity of the mouth is represented by thick black lines, and the tongue, the mucous membrane of the hard palate and the gums are left white. The section, although essentially coronal is slightly oblique from side to side, being a little further forward on the right side than on the left.

In this case, the mouth was closed before the body was frozen, so that, as can be seen from the section, the dorsum of the tongue was in close contact with the palate, and the cavity of the mouth was merely potential. It will, however, be observed that the gums of the superior dental arch do not meet those of the lower, but are separated by a distance of 6 mm. The space between the gums, opposite the incisors, was about the same as at this level. Several sections in my possession from new-born children, show a corresponding separation between the two gums. In one case, that of an infant five days old, the head was flexed before the body was frozen, so that the chin was pressed against the front of the neck, and the mouth was thus firmly closed; yet, the interval between the gums of the upper and lower jaws was nearly equal in extent to that seen in the child two months old. Infants of about these ages are probably able, by forcible contraction of the elevators of the lower jaw, to bring the gums in apposition; but these sections show that this does not occur under ordinary circumstances, even though the mouth is so closed that the tongue is in close contact with the palate. I have been unable to find any reference to these relations of the gums, but they are of interest as they show that, owing to the shape of the jaws, provision exists at birth for a considerable development of the alveolar arches and teeth before the gums of the two jaws can readily meet.

If a vertical mesial section be made of the head of a new-born child, or of one a few months old, the cut edge of the gum of the lower jaw will be found lying in a plane posterior to that of the upper. On an average the posterior alveolar plate of the upper jaw is opposite the anterior one of the lower jaw. In the coronal section of the child two months old, the second molars were divided in the upper jaw, and the first molars in the lower. This was not due to any obliquity of the section, but to the fact that the corresponding teeth in the two dental arches do not lie vertically opposite one another, those of the lower jaw being behind those of the upper.

At this age the maxillary sinuses are narrow from side to side, and do not extend outwards to any appreciable extent between the alveoli of the teeth and the orbits. In this infant each sinus measured about one-third of an inch from before backwards.

C. S. Tomes (*) describes the alveoli of the upper jaw in the new-born child as "separated only by a thin plate of bone from the orbits." In the child two months old, this osseous wall opposite the second molars was four mm. thick. On examination it was found to consist of two layers of compact tissue, one belonging to the alveolus, and the other to the orbit, while between them there was some cancellous tissue. In new-born children I have found the bone between the alveoli and orbits nearly as thick as in this child, so that the statement of Tomes is somewhat misleading.

This specimen affords a good example of the amount of fat that may be found in the cheeks. The distance, in the plane of this section, from the outer surface of one cheek to that of the other, is about three inches, while that between the two buccinator muscles is little more than an inch, so that each cheek is nearly an inch in thickness. The

* A Manual of Dental Anatomy—2nd Ed., 1882, p. 180.

cheek consists mainly of fat, and if this be examined it will be found to be divisible into two portions, one continuous with the ordinary subcutaneous fat, and another in the form of one or more lobules surrounded by a clearly defined capsule, so that it can be very easily shelled out. These lobules of fat (see fig. 1, s. c.) have been called "sucking cushions," as it is believed that they serve an important function in the act of sucking, for they tend to distribute the atmospheric pressure, and prevent the buccinator muscles being pressed inwards between the alveolar arches when the vacuum is created in the mouth.

It is maintained by H. Ranke (†), who has very carefully investigated these lobules of fat, that they exist at all periods of life, but are best marked in infants. He also asserts that in emaciated children they are only slightly diminished in size, although the general subcutaneous fatty layer be almost entirely removed.

With the exception of the canines, the crypts of those teeth of the permanent set that afterwards take the place of the milk teeth, viz., the incisors, canines, and bicuspid, do not call for special notice. The peculiar position of the canines before their eruption, is seen in two of my coronal sections, one obtained from a girl six years old, and another from a girl nine years old. In the first only one of the first permanent molars, viz., the left inferior, had erupted, although the corresponding tooth on the right side was nearly through the gum. The second one had cut all her permanent incisors, but the first bicuspid had not appeared. In the former subject a section was made near the plane between the first and second upper temporary molars, the posterior part of the first temporary molars was destroyed by the saw, but the second temporary molars escaped injury. The anterior of the two surfaces exposed by this cut showed the first bicuspid, and the posterior one the second bicuspid. The posterior parts of the first bicuspid, like those of the first molars, were removed, but the second bicuspid were not touched, except a small part of the left one. The bicuspid were therefore vertically above their corresponding temporary molars. The principal interest of this section, however, is the view it affords of the upper canines. These are seen in the anterior part of the section lying above and internal to the first bicuspid, and close to the inferior meatuses of the nose. The crowns of the canines, which were well developed, were directed outwards and forwards. On examination the septum between the crypts of the canines and the first bicuspid was found to be incomplete, the two crypts communicating by a small aperture.

In the girl aged nine years a section was made which closely agrees in its position, and in the teeth exposed, with that just described. Thus the anterior part of the section (see fig. 2) presents a view of the first left temporary molar, which was partly decayed: above and internal to it lay the first bicuspid, while still higher up and more internal, the canine. The section was a little farther back on the right side, and there a small opening was made by the saw into the crypt of the canine, but this tooth was not cut.

The crypts of the permanent lateral incisors and of the first

† Ein Saugpolster in der Menschlichen Backe. Virch. Arch. Bd. XCVII. 1884, p. 527.

bicuspid are separated simply by a bony septum, for the canines are placed on a plane above them. It is needless for me, in a Society of Dental Surgeons, to dwell upon the points of practical interest connected with this peculiar position of the crypts of the permanent canines in relation to those of the other teeth, but I would direct your attention to the admirable view that is obtained from these sections of the relation of the canines to the nasal cavity, the antrum of Highmore, and the nasal duct. In the girl nine years old (see fig. 2) the canines were near the outer walls of the inferior meatuses of the nose, especially as can be seen on the right side of the section, near

FIG. 2.

their posterior part. In the other girl, the canines were nearer the middle line, and consequently below the floor of the nose. From the position of their crypts, these canines might be more appropriately called nasal than eye teeth. In both the subjects, the antrum of Highmore was opened by the sections exposing the canines, and its cavity was found to extend forward fully as far as those teeth. In these children, the opening of the nasal duct into the nose corresponds to the plane of the posterior surface of the crypts of the permanent canines, while a line, prolonged downwards and backwards in the direction of the nasal duct, would reach the anterior surface of the first permanent molar.

Some of the most interesting points, in relation to the growth of

the jaws after birth, are intimately connected with the development and eruption of the permanent molars; and since the publication by John Hunter of his classical work "On the Natural History of the Human Teeth," the process by which space is formed in the alveolar arches of the jaws for the permanent molars, has been the subject of numerous investigations. J. Tomes (*), in particular, describes very fully and accurately the conditions of the jaws and teeth in children of different ages, and confirmed and extended the observations of Hunter with regard to the peculiarities in the growth of the lower jaw. It appears to me, however, from a perusal of the literature of the subject, that but little attention has been directed to the relative position of the permanent molars of the upper and lower jaws before their eruption, and the changes in their positions during their eruption; and I will now describe some sections in illustration of these points.

The specimens I shall first consider were obtained from a female child about fifteen months old, and they show the position of the first permanent molars in the upper and lower jaws. In this subject, a horizontal section was made at the level of the mouth. All the

FIG. 3.



temporary incisors and first molars had erupted, but none of them were divided, as the mouth was slightly opened, and the saw was carried backwards between the milk teeth of the upper and lower dental arches. Behind the alveolar arches, the ascending rami of the lower jaw were cut across, and the first permanent molars were exposed embedded in the basis of the coronoid processes. Fig. 3 was made from a life-sized drawing of the lower portion of this section.

Another horizontal section was made in this subject. It was a

* A system of Dental Surgery. 1859.

little above the level of the floor of the nose, and it opened the crypts of the first permanent upper molars (see fig. 4). In this subject, the distance between the inner surfaces of the first temporary molars in the upper jaw was 21 mm., and between those in the lower 20 mm.; so that the upper molars were a small fraction further apart than the lower. It was very different, however, with regard to the first permanent molars, as can be readily seen from a comparison of the two sections (see figs. 3 and 4). The upper permanent molars were 21 mm. from one another, and the lower ones 38 mm. The lower molars were not only external to the upper ones, but also posterior to them. Thus, in the lower jaw, the distance from the posterior surface of the crown of the first temporary to the anterior extremity of the first permanent molar was 11 mm., while the interval between the corresponding teeth in the upper jaw was only 6 mm.

The crowns of the upper molars were directed downwards and slightly backwards, and those of the lower molars forwards, inwards,

FIG. 4.



and slightly upwards. At this period of life there is not room in the alveolar arches for the first molars, so that these are placed, the upper, at the back of the tuberosity, and the lower, in the base of the coronoid process.

The second molars begin to be developed about the seventh month after birth, but they remain for a long period very rudimentary, their calcification not commencing until about the fourth year. The section in this child above the level of the floor of the nose (see fig. 4), exposed the germs of the second molars just posterior to the first molars.

We will now pass to the consideration of the appearances presented by some sections in children, a little before and during the period of eruption of the teeth of the second dentition.

In a boy about five years old, one sagittal section was made through the head about 2 cm. to the right, and another 3 cm. to the left of the mesial plane. The former cut (see fig. 5, which shows the internal of the two surfaces exposed by this section) passed backwards just outside the angle of the mouth and external to the crowns of all the milk teeth, with the exception of the second upper molar, the outer surface of which was just grazed by the saw. Two fangs of the second upper temporary molars, and one fang belonging to the corresponding lower molar, were divided. This child had a very good set of milk teeth, and the upper temporary molars had their normal relation to the lower, as they extended a little further out than the latter. Behind the milk teeth, the first and second permanent molars were divided in the upper jaw, and the first permanent molar in the lower one.

FIG. 5.



The left sagittal section was more external than the right one, being about 3 cm. from the mesial plane. It was several millimetres external to the upper permanent molars, but divided the first and second lower permanent molars.

The preparations obtained by these sections demonstrate that the first permanent molars are not vertically opposite one another, and, indeed, they showed that but slight progress has been made towards this position, as compared with their relative situation in the infant fifteen months old.

In the latter subject, a section might have been made which would have just shaved the external surface of the first upper molar and the internal surface of the lower ; while in the right sagittal section in the boy (see fig. 5) the first upper permanent molar had its outer surface shaved off, and the first lower permanent molar was divided near its inner surface. The upper molar did not project to any appreciable extent externally to the milk tooth in front of it, while, in the lower jaw, the permanent molar was situated almost entirely external to the plane of the outer surface of the second temporary molar.

It is worthy of note that the gums formed a distinct ridge directly behind the milk teeth in each jaw, and that, while the upper molars were almost directly above the gums, the lower molars were below and external to them.

In the girl aged six years, already referred to, a coronal section of the head was made at the level of the first permanent molars, all of these teeth being divided. As previously mentioned, the left inferior molar had erupted, and the right inferior was nearly through the gum, but the upper molars were still a short distance from the surface. The lower molars were a little external to those of the upper jaw, but as the former inclined inwards, they would have gained their normal adult relations to the upper ones by the time that the teeth would have come in contact, had the child lived.

In a similar section in the girl nine years old, all the first permanent molars were divided, but rather nearer their posterior surface than in the former subject. These teeth met, so that the external cusps of the lower molars were between the internal and external cusps of the upper molars. In the upper jaw, the second molars were also divided, while, in the inferior maxilla, there were no traces of the corresponding teeth. The second upper molars were cut near their anterior surface, and the specimen illustrates the fact that these teeth tend to overlap the first molars.

In each of these girls another section was made behind that exposing the first molars. In the girl six years old, it divided the second lower molars, which were embedded in the anterior part of the bases of the coronoid processes, but the section passed behind the second upper molars. The crypts of these teeth were, however, opened, and on the left side a small piece was shaved off the posterior part of the crown of the upper tooth (see fig. 6, which shows the anterior of the two surfaces exposed by this section).

The section in the girl nine years old differed from that just described, for it passed completely behind the tuberosities of the superior maxilla. The second lower molars were divided rather nearer their posterior than their anterior surfaces, and, as in the girl six years old, they were situated in the bases of the coronoid processes. The tuberosity of the upper jaw was afterwards exposed by the removal of some fat and cellular tissue from the anterior of the two preparations obtained by this section. The wisdom tooth was found lodged in a recess at the back of the tuberosity. It was in a rudimentary condition, as although the tips of its cusps were calcified, they were not all united together ; indeed, this tooth was scarcely so well developed as is the second temporary molar at birth.

In this paper, specimens have been described in which the 1st permanent molars were exposed, and their positions determined in an

infant fifteen months old (see figs. 3 and 4), in boy five years old, (see fig. 5), and in two girls, aged respectively six and nine years. From these preparations, it is evident that the relative position of these teeth in the upper and lower jaws before eruption, is the reverse of that which they occupy after they cut the gum and their crowns come in contact. Before eruption, the first upper molars lie much nearer the mesial plane, and also further forwards, than the lower ones; while, after they come in contact, the crowns of the upper molars extend a little further outwards and backwards than those of the lower.

FIG. 6.



Unfortunately my specimens do not illustrate so completely the relative positions of the second and third molars; still, there can be little doubt but that they undergo similar changes in position. Thus, in the boy five years old and in the girls six and nine years of age, the relative position of the second molars of the two jaws is very similar to that of the first molars in the infant fifteen months old.

The question now arises as to how the permanent upper and lower molars alter their respective positions, so that in place of the upper ones being distinctly anterior and internal to the lower, they become slightly external and posterior. Is it by a difference in the growth of the two jaws by which the teeth are brought vertically above one

another, or is it to be attributed to a difference in the direction taken by the teeth during their progress towards one another?

There are several differences in the condition of the two jaws, that might lead us to suspect that during their growth the posterior part of the alveolar arches may extend outwards and backwards more rapidly in the upper than in the lower jaw. In the upper jaw, the alveoli for the permanent molars are formed from the lower and back part of the tuberosity, while, in the lower jaw there must be an absorption of the anterior part of the ascending ramus before space can be formed for these teeth. Again, the suture between the two halves of the lower jaw is obliterated by the end of the first year after birth, so that increase in the breadth of the jaws can only occur by deposition on their outer surface and absorption on the inner; while, in the upper jaw, the suture between the superior maxillæ persists during the whole period of life, and consequently the superior alveolar arch can increase in breadth by new formation of bone at the inner edge of the palatine process, as well as on the outer surface of the alveolar arch.

According to C. S. Tomes,* the distance between the inner alveolar plates at the level of the junction of the first and second temporary molars, is practically the same in an infant eight months old, as the corresponding points are in an adult.

From my own limited observations, I should feel inclined to believe that the growth of the lower jaw is accompanied by some increase in the space between the inner alveolar plates, but that it is probably a little more marked in the upper jaw than in the lower. I believe, however, that it is mainly owing to the differences in the direction of the upper and lower molars, that the relative position of these teeth is altered. It will be evident from an examination of the sections of the first lower molars in the child fifteen months old (see fig. 3), and of the second molars in the girl six years old (see fig. 6), that these teeth have a decided inclination inwards and forwards. On the other hand, however, the upper molars exhibit a tendency to point outwards and backwards. This difference in direction is very obvious, even in the adult skull.

It is well known to dentists that the outer alveolar plates of the lower molars are much thicker than the inner ones, while the reverse is the case with those of the upper molars. If the lower permanent molars be examined by looking vertically down upon them, the inner part of their crowns will be found to overhang their internal alveolar plates, so that the latter are concealed from view; while a similar examination of the crowns of the upper molars reveals a tendency of the outer parts of the crowns to bulge beyond the level of the outer alveolar plates. As the opposing molars have a considerable distance to travel, during their eruption, before their crowns can meet, the differences in their course must give rise to a marked alteration in their relative position.

The opinion, that it is rather the differences in the direction of the teeth than in the growth of the jaws, that account for the alteration in the position of these teeth, is supported by the examination of the sections of the boy five years of age and of the girl six years old. We have seen that, in the boy, the differences in the position of the upper

* Op. Cit., p. 185.

and lower first molars are nearly as marked as in the child fifteen months old. During this period, the jaws have been gradually altering to make room in the alveolar arches for the first molars, and these teeth have been increasing in size, but they have not, as yet, made much advance towards one another. Again, in the girl six years old, the lower molars are still a little external to the upper ones, but their relative inclination is such, that by the time their crowns come in contact, they have gained their normal relation to one another.

The PRESIDENT thanked Dr. Symington for his paper, which had been listened to with an unusual amount of interest. In accordance with the usual custom, the discussion would be postponed until the paper had been circulated among the members in the Society's Transactions.

Some interesting casual communications were then brought forward by the SECRETARY (Mr. Amooore), Mr. MACLEOD and Mr. WILSON.

The second Ordinary Meeting of the Session 1886-7 was held on the 9th of December—Mr. W. BOWMAN MACLEOD, President, in the chair.

At the conclusion of the formal business, Mr. Patrick S. Walker, Dundee, was ballotted for, and admitted as a member of the Society.

The PRESIDENT announced that owing to a delay in the preparation of some woodcuts, it had not been feasible to publish Dr. Symington's paper in time for the meeting; remarks on the paper would therefore be postponed for the present, and the business of the meeting—a discussion upon the disease known as *Pyorrhœa Alveolaris*—would be proceeded with, upon which subject he would first offer a few remarks.

The disease, for some time known as Rigg's disease, and now better named *Pyorrhœa Alveolaris*, has long been known, but has only been much debated during the last twenty years by Riggs, Mills, Albrecht, Wedl, Salter, Tomes, Arkovy, Miller, Rerwinkel, and others more or less known in the scientific walks of Dentistry. I do not propose to enter an opinion as to its pathology or etiology, nor yet to discuss the various methods of treatment or remedies advocated by these gentlemen, but will confine myself to a simple statement regarding the use of sulphur as a curative agent in this lesion. Whatever may be our opinion as to the part which tartar plays in this disease, I think we are all agreed that tartar being matter in the wrong place, it should, if present, be thoroughly removed, so as to give any subsequent treatment the best possible field for its recuperative action. This being done, I find that the bi-daily cleansing of the teeth and gums with a tooth-powder composed of flowers of sulphur and precipitated chalk, will very soon restore the parts to a healthy condition, the pus secretion will cease, and the teeth become firm in their sockets. Whether the tartar be the cause, or only a concomitant, or the *pyorrhœa* be owing to a perverted condition of the mucal secretions, sulphur will, and does, act beneficially.

Its therapeutic action is stimulating and antiseptic, and it is likewise a solvent of calculus. If it contains a little free sulphurous acid, which it frequently does, so much the better.

As I have said, it is stimulating, antiseptic, and a solvent of calculus, and it has this further, and what, I think, very great merit, viz., that it can be regularly and thoroughly applied by the patient. I have now been using it for over a twelvemonth, and have reason to be satisfied with its uniform success; and as I recommended it to the members

of this Society in March last, I will be pleased to hear how it has succeeded with those who have given it a trial.

Dr. SMITH said that he believed the mixed powder of sulphur and magnesia, brought before the Society by Mr. Macleod, was, in all probability, destined to be of much service, not only in pyorrhœa alveolaris, but in other affections of the mouth. The rationale of its action seemed founded upon tangible principles, as there was no doubt that sulphur and its combinations had played a prominent part in the *role* of therapeutics as applied to similar affections. With reference to the pathological nature of pyorrhœa alveolaris, or Rigg's disease, two theories might be advanced—first, that it commenced from without; and, second, that it commenced from within. Among those cases commencing from without, might be classed such as originated in the alleged irritation caused by the deposit of tartar, or in inflammation of the gum and mucous membrane; and among those originating from within, the occurrence of alveolar caries would, in all probability, be found a common cause. Tartar and inflammation of the gum did not always give rise to the symptoms distinctive of pyorrhœa alveolaris, but caries of the alveolar walls invariably did so. The anatomy of the parts in a great measure accounted for this. It was admitted in surgery, that, as a general rule, pus seeks the nearest and easiest mode of outlet, and if this were an affection of the gum and submucous tissue, it would manifest itself to a proportionately greater extent beyond the margin of the alveolar cavity than it very frequently does. But, in a large number of cases, the symptoms during its continuance, and the appearance and lesions of the alveolar walls after its existence, showed that these had been the structures principally concerned in the disease. This accorded with Dr. Smith's own observations in this affection, to which he had for long paid considerable attention; and also with the morbid appearances described by most writers on this disease. Dr. Smith had said that *prima facie*, the disease commenced with, and consisted in, caries of the alveolar plate; and that the tartar deposit and inflammatory appearance of the gum, were possibly of a secondary nature. It might be argued that the alveolar plate was not altogether the kind of bone in which caries occurred; that necrosis and rapid separation of the dead part would be more likely to take place there than a long protracted ulcerative process. But this reasoning was here to be met in the local modifications of the bony tissue. Necrosis was, no doubt, the common affection met with in compact bone, and caries in the cancellous variety. This did not arise from the disease in its ultimate pathology being different in the two cases. In necrosis, the result of the inflammatory action and exudation, was death of a piece of the bone by obliteration of the vessels contained in the Haversian canals, owing to the unyielding nature of the mass of compact bone surrounding them. In cancellous bone, room was afforded for dilatation of the vessels, so that complete stasis was not occasioned by the exudation. And in the very attenuated alveolar walls, the pressure outside the vessels would be comparatively diminished also, and might explain the more frequent existence of caries there.

The question whether this caries, or rather what is called rarefying osteitis, is a primary or secondary lesion, was difficult positively to decide. Cornil and Ranvier assert that it is secondary to fatty degeneration of the contents of the lacunæ, and subsequent inflammation and

destruction of the trabeculæ in their vicinity, which then form so many centres of suppurative inflammation. While this is the opinion of one set of pathologists, others believed that inflammation precedes this fatty degeneration, and may be of a simple, scrofulous, tubercular, or syphilitic origin. At all events, the symptoms described by authors who have written on this disease, would indicate, in the separation of the dento-alveolar structures, the channelling of the sockets and disappearance of their bony walls, that one form at least was probably due to alveolar caries.

It seemed very uncertain whether the deposition of tartar was not, in many cases, a result rather than a cause of the disease; the dark coloured and hard tartar was always found in much less quantities than the softer and white variety, and probably had been slowly deposited and stained in some manner due to this longer exposure of its surface. This dark tartar, too, was much more frequently found at the necks of the upper teeth than was the white variety. It was also found on the denuded fangs of teeth, which denudation, again, had probably been brought about by a form of alveolar caries, possibly without suppuration, as this was known to occur in other parts of the skeleton, and sometimes appeared more like ordinary absorption of the bone than any other form of disease.

Mr. WILSON said he quite agreed with what Dr. Smith had just said. The initiative was always periostitis, followed by disintegration of the alveoli, so that it might be the result of either local or constitutional causes.

Mr. MACGREGOR said he had used Mr. Macleod's prescription in one or two cases, and had found most marked and beneficial results following its use.

Mr. DURWARD spoke favourably of the sulphur powder.

Mr. G. W. WATSON thought that if this mixture advocated by Mr. Macleod, used as a tooth powder, gave satisfactory results in the treatment of pyorrhœa alveolaris, it would be a great boon to us, as our patients would be able to take in hand their own treatment. In this disease, there is a pocketing of the gum round the teeth, softening and destruction of bone at alveolar margins, and an oozing out of a serous or sero-purulent secretion, which is laden with micro-organisms. Bacteria micrococci and bacilli (allied to algæ). This secretion seems to be derived from the connective tissue of the parts, and is thought to induce the same condition in adjacent healthy teeth by infection.

The first step in the treatment of this disease is to scrape the softened bone and remove all the tartar, if present. In reference to this tartar, there is a variety found pretty far up on the root, of a dark greenish colour—especially in cases where there has been considerable destruction of the bone at the alveolar margin—this was, he thought, not derived from the saliva.

The same condition was observed, as a result of chronic alveolar abscess, where no sinus was present, and he had repeatedly found, on extracting such teeth, nodules of this dark tartar at or near the apex of the root, where no saliva could possibly reach.

The presence of micro-organisms in the secretion of the gum pockets must tend to keep up a great amount of irritation, if they are not the direct carriers of infection themselves, and it is, therefore, important to get rid of them as soon as possible.

They are divided into two groups—ærobian, those requiring oxygen for their development; and anærobian, those that do not require oxygen for their development. A mixture of hydrogen peroxide and hydrargyri perchloridi, injected repeatedly into the gum pockets, destroys both varieties, and this should be followed up with aromatic sulphuric acid, to cause granulation of diseased parts. This treatment, carried out every three or four days for several weeks, generally results in a speedy cure. It was to be hoped, however, this new cure would render this somewhat elaborate process unnecessary.

Mr. AMOORE, in reference to Mr. Watson's recent remark, that the presence of tartar is not invariable in this disease, said he remembered Mr. C. S. Tomes citing a case in point during a discussion which bore largely upon this subject, at the International Medical Congress of 1881. It was the case of a patient, aged twenty-five, in which he extracted all the remaining teeth, and on many, which were distinctly affected, there was no trace of tartar. He had also heard the suggestion respecting the serous origin of the hard greenish variety once or twice before, and he thought he was right in referring it on one occasion to Mr. Coleman in one of his lectures. He (Mr. Amooore) had found it very high up on the roots of teeth, very commonly upon badly inflamed stumps, apparently beyond the reach of the saliva, though he could not recall having found any directly enclosed in an abscess sac.

Casual communications were brought forward by Mr. WATSON, Mr. WILSON, and Mr. MACINTOSH.

The President announced that the next meeting would take place on the evening of January 13th, 1887.

HOSPITAL REPORTS AND CASES IN PRACTICE.

Notes on an Odontome.

By JOSEPH ARKOVY, M.D., in Buda Pesth.

ODONTOMES are still more or less rare, and, therefore, every case deserves to be made public. Both French and English authors, during the last fifty years, have illustrated the subject with an instructive series of cases (Salter, Forget, Robin, Broca, Magitot, Tomes and others); Broca and Magitot have even attempted classifications in order to regulate the subject systematically: but the capricious variety of cases, and, more particularly, the untrustworthy nature of microscopical observations, render every single case interesting. These considerations have induced me to publish the following case:—

Ludwig E. Schmied, from a provincial town, a healthy man, aged forty-one years, presented himself at the public Dental Institution, on the 7th April, 1886: near to the angle of the right jaw a diffused growth was visible, reaching from the tempo-maxillary

joint, deep under the lower maxilla. The external appearance was like what is daily seen in alveolar periostitis, especially in difficult eruption of wisdom teeth. The intrabuccal symptoms, trismus mucularis, swelling of the whole of the affected mucous membrane and periostitis, bore out this resemblance. In the place of the third molar one could detect with the finger a body which was much too large to suggest the presence of an unerupted tooth. After many attempts I was at last successful in detecting a bony substance. The patient complained of periodical growths, and later on of a swelling in the neighbourhood of the chin and the hyoid bone. The structure which was at once recognised as an odontome, was firmly implanted in the gum, and was buried on one side and at the posterior labial surface into the soft parts. The removal of the odontome by means of an elevator was an easy matter as it had no root, and as a result the trismus was easily got rid of. The odontome, of which I give an illustration (see Fig. 1), was a hard knobby substance, about 2.8 centimeters

FIG. 1.

2.8 cm.



2.5 cm. {

in breadth and 2.5 in height. The lower half had a corroded appearance, like carious bone. In the middle of the upper half was observable a fully developed abnormal crown. Through the latter the odontome was divided by a fine saw, and it was then seen that inside this substance there appeared the outline of two diverging roots. A little saw was used for this operation very successfully.

We will now occupy ourselves with the histological details. The whole structure represents a conglomeration of dental tissues, the cement and outer shell of which is formed of bone tissues.

The latter forms a very considerable—one cannot say the most considerable—part of the structure. Histologically it corresponds here and there to young bony tissues, osteophytic bony columns, and mostly to the embryonic bony tissues of roots. The true bony elements are present in great number, sometimes close together, sometimes separated by the above-named cementing substance. Thus they appear as round or oblong tracts, round the rim of which a streak of enamel is sometimes formed, or is present in a thick lump. The enamel of the rudimentary tooth (Fig. 1a) is not identical with the enamel in this section (see Fig. 55). The appearance of a whole section with the numerous dental

FIG. 2.



systems remind one very much of the diagonal section of the teeth of myliobates (Owen's *Odontography Atlas*, pl. 27). The details of the form can be best explained by the accompanying drawings.

It is only necessary to add that one drawing (Fig. 2) is taken from the edge of the tooth, but the others from the inner part, and that Figs. 2, 3, 4, and 5 represent four successive views. All the illustrations are drawn from nature, by Hartnack.

Fig. 2 shows a part of the edge of the odontome, with bone

canals (*a*), boundary lines between dentine and cement (*b*), globular spaces (Czermak, Owen) in the dentine (*c*), bone cells in the cement (*d*), a narrower piece containing canaliculi (*e*). (These are larger in several places; they are open at the top and have a blind end towards the inside.)

FIG. 3.

Fig. 3.—Part of the inside of the odontome, *g*. the limit between the tooth systems, *p*. the pulp, *z*. dentine, *c*. globular spaces, *d*. bone cells, *k*. cement with few bone-cells.

Fig. 4.—An isolated denticle,* *z*. dentine, *d*. bone-cells surrounded by cement.

* In the correct sense of the word, as this technical expression is used in English dental literature. Baume uses the same term in other senses.

Fig. 5, sequel to Fig. 4.—(m) Cement with extended bone-cells, (c) boundary-lines between cement and ivory.

If we compare this odontome with the known and published cases, it is in no way superior to them either in size or form, but it is remarkable in structure. It was at first a matter of difficulty to class it correctly. Magitot* classifies odontomes in three groups:—

FIG. 4.

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1

—d

coronaires, embryoplastiques, and radiculaires. The case in question may at first sight appear to fall under the second class—that of embryoplastique odontomes; but it does not actually agree with either the embryoplastique or radiculaire odontomes since, according to Magitot, only one or two kinds of hard structures must be admitted in either of them. We must, therefore, go back to the classification of Broca, which includes under the title of "Odon-

* Magitot. "Traité des anomalies du système dentaire," &c., Paris, 1877.

tomes composés" those cases in which several tooth follicles have undergone the same teratological process.

It is evident from the illustrations that the cause of such a confusion of dental tissues can only be accounted for by the comingling of several follicles which eventually become diversified. This is directly proved by the fact that all hard tooth tissues are represented in the odontome, and that, to a certain extent, like denticles, all these tissues are to be found together. The proof is indirectly supplied by the fact that the odontome in question was not formed at the expense of the tooth in the centre of which (Fig. 1a) it was found embedded or of its root, as is so

FIG. 5.



often seen in crown or root odontomes. Further, it may be noticed that the above-named process may happen inside a large multilocular follicle, as in the case of multilocular cysts. Everything seems to point to this example being considered as an *odontome compositum* (Broca).

The literature which I have at my command just now is

strangely poor in histological illustrations and descriptions of the composition of odontomes. The scarcity of the specimens, and the great care which is taken to preserve existing specimens in their integrity, explains why only in isolated cases they are cut with the saw and grinding stone. Forget and Robin, according to Magitot's* assertion, also published histological details of their cases. Unhappily these works† are not accessible, so that I am compelled to confine myself to Wedl's Atlas. Wedl describes a case of a misformed tooth,‡ which agrees with my example in many respects, namely, that both are odontomes composés (Broca). It is only to be regretted that with the exception of two figures (Taf. III., 37, 38) the examples are taken with a small power (30 diam.) and give no satisfactory picture of the minute structures. The accompanying illustrations may help to supply this want.

In conclusion, I would wish to express the hope that this research into the structure of an odontome may incite to further researches in a similar direction, and if so it must bring to light many interesting facts relating to the history of such developments.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Practical Microscopy in Relation to Odontology.

By J. W. GROVES, F.R.M.S., &c.

MR. CHAIRMAN AND GENTLEMEN,—Some time since your President, whose absence to-night I much deplore, asked me to give you a demonstration in the method of making histological preparations of teeth, to which I gladly acceded, although I have had but little experience in this particular branch of histology, as the mode of preparing one tissue is almost identical with that used for others. The order in which I propose to treat of the various processes is that in which they are used, viz. : fixing, hardening, cutting, staining, clearing, and mounting.

So soon as a tissue is removed from the body changes commence ; therefore it is important that the material should be as fresh as

* Magitot in the "Encyclopædical Dictionary of Medical Societies," *De-chambre*, Vol. XXVII.

† Forget, "Etude histologique d'une tumeur, &c., Paris, 1861 ; Bull. Soc. de Chir. Robin, Bull. de l'Acad. de Méd., &c.

‡ Atlas zur Pathol. d. Zähne. Taf. III. Fig. 34, 39.

possible, and that it should at once be placed into a fluid which will *fix* it. The best fluids to use for this purpose are—

- (1) *Osmic acid* ($\frac{1}{4}$ to 1 per cent. solution in water). This has but little penetrating power, therefore the material to be acted upon should be in slices of not more than $\frac{1}{4}$ inch thick.
- (2) *Osmic acid*, 10 parts ; *chromic acid*, 25 parts ; water, to 100 parts.
- (3) *Picric acid* (saturated solution in water). This is often spoken of as a hardening agent ; it is more useful as a fixing agent ; for which it is most excellent.
- (4) *Silver nitrate* ($\frac{1}{2}$ to 3 per cent.). This is useful for fixing and also for staining. This also has but little penetrating power.
- (5) *Gold chloride* ($\frac{1}{2}$ to 1 per cent.). This, though a splendid fixer, is more used as a stain, especially for nerve tissues.
- (6) *Chromic acid* ($\frac{1}{3}$ per cent. in methylated alcohol) is at once a fixing and a hardening agent.
- (7) *Neutral chromate of ammonia* (5 per cent. solution in water).
- (8) *Picro-sulphuric acid*, made by adding 2 per cent. of sulphuric acid to a saturated solution of picric acid in water. This must only be used if there is but very little lime present, or an insoluble precipitate will be produced.

Tissues cannot be cut in a fresh condition if thin sections are desired ; they must therefore be subjected to a process of hardening, for which purpose the most generally useful reagent is alcohol. In order to insure the tissue being equally hardened throughout, the pieces should be small and the fluid (which should be changed frequently) must be used at first dilute, then stronger and stronger until the full strength is reached.

The following is a list of the more useful *hardening agents* :—

- (1) *Alcohol*.
- (2) *Chromic acid* ($\frac{1}{4}$ per cent.).
- (3) *Bichromate of potash* (2 per cent. solution in water).
- (4) *Bichromate of ammonia* (2 per cent. solution in water).
The bichromates penetrate better than chromic acid ; they are therefore generally preferable to it, and when chromic acid is used it is well to place the tissue at first into one of these fluids for a short time.
- (5) *Muller's fluid*, composed of—

Bichromate of potash, 2 to $2\frac{1}{2}$ parts ;
 Sulphate of soda, $\frac{1}{2}$ part ;
 Water, 100 parts.

This is specially useful for nervous tissues.

As soft tissues require to be hardened, so all hard—*i.e.*, calcareous—material has to be softened, before sections can be made except by grinding. Decalcification is effected by immersion in one of the following fluids :—

- (1) *Picric acid* (saturated solution).
- (2) *Chromic acid*, $\frac{1}{4}$ part ; *nitric acid*, $\frac{1}{2}$ part ; *water* 100 parts.
- (3) *Ficro-nitric acid*, made of—
 Water, 100 parts ;
 Nitric acid (25 per cent. of N_2O_5), 5 parts ;
 Picric acid to saturation.

N.B.—This can only be used when only very little lime is present.

It is necessary in all cases to have a considerable bulk of the hardening fluid compared with the pieces of tissue, and to change it every day for the first four or five days.

The material being now ready for sectioning, it is necessary to consider the various embedding media :—

- (1) *Paraffin and lard*.
- (2) *Paraffin and vaselin*.
- (3) *Paraffin and chloroform*.
- (4) *Wax and olive oil*.
- (5) *Gum mucilage + a few drops of camphorated spirit*.
- (6) *Gum mucilage + syrup + bichloride of mercury*.
- (7) *Celloidin in alcohol* (absolute) *and ether*.

How to use these will be best described when treating of some of the section-cutting machines now in use.

The sections may now be stained, or, if more convenient, may be placed in a preservative solution until wanted ; for this purpose the following may be used :—

- (1) *Alcohol* (2 parts), *water* (1 part).
- (2) *Glycerine*.
- (3) *Gum arabic + syrup + mercuric chloride*, $\frac{1}{2}$ per cent.
- (4) *Bichromate of potash*, 1 per cent.

The object to be obtained by staining is the rendering more distinct certain tissues or particular portions of cells. For staining nuclei of cells the following stains are of especial value :

- (1) *Logwood* or *Hæmatoxylin*.

(a) *Hæmatoxylin extract* (saturated solution in *alcohol*).

(b) *Potash alum* (saturated solution in *water*).

Add a few drops of (a) to (b), and when mixed add a few crystals of *phenol*.

(2) *Borax carmine*.

(a) *Carmine*.

(b) *Borax*.

(c) *Distilled water*.

Place (a) and (b) dry in a mortar and dissolve in water. Allow to stand for twenty-four hours and then decant. This will stain in mass—*i.e.*, will penetrate well.

The next two stains, besides tingeing nuclei, also colour other parts of the sections.

(3) *Anilins* (dissolved in water).

(4) *Anilins* (dissolved in alcohol).

(5) *Osmic acid*, 1 per cent.

(6) *Osmic acid*, 10 ; *chromic acid*, 25 ; *water*, 100 parts.

(5) and (6) are of marked value for selecting fat, which becomes coloured grey or black.

(7) *Silver nitrate*, $\frac{1}{2}$ to 3 per cent.

(8) *Gold chloride*, $\frac{1}{2}$ to 1 per cent.

(7) colours intercellular and interfibrillar cement substance brown.

(8) produces a distinct violet tint in nerves, while both (7) and (8) prevent any considerable shrinking or other alteration.

After staining, the next step is to wash the sections, and the fluid to be used for this purpose must depend upon the solvent of the stain which has been employed: thus, if an aqueous stain has been used, the sections must be placed in water; whereas if it were an alcoholic stain, then the washing fluid must also be alcohol. The next steps to be taken must depend on the nature of the medium which it is intended to employ as a mountant. Of *mounting media* these are among the best:—

(1) *Glycerine*.

(2) *Glycerine jelly*.

(3) *Farrant's medium*.

Gum arabic, $\bar{\text{3iv}}$.

Water, $\bar{\text{3iv}}$.

Glycerine, $\bar{\text{3ij}}$.

(4) or—

Gum arabic, 5 parts ;

Water, 5 parts ;

to which are added after twelve hours—

Glycerine, 5 parts ;

Phenol (.05 part in water), 10 parts.

(5) *Canada balsam* (pure).

(6) *Canada balsam dissolved in chloroform.*

(7) *Canada balsam dissolved in benzol.*

(8) *Canada balsam dissolved in xylol.*

(9) *Dammar lac.*

After washing the sections they may be mounted at once in either (2), (3), or (4), but if it be desired to put them up in (1) it is best to put them first into weak glycerine and to transfer them later on to stronger glycerine, or to place them in a watch-glass full of weak glycerine, and to leave them there with a cover so that by evaporation the fluid may become gradually stronger, when they may be placed on a slide, a cover-glass placed over them, be cemented, &c.

If, however, they are to be mounted in either of the preparations of *balsam*, they must, after washing, be thoroughly dehydrated with alcohol, then clarified with one of the *clearing* agents, and from that be transferred to the balsam or dammar.

Of *clearing agents* the following may be enumerated :—

(1) *Oil of cloves.*

(2) *Oil of cedar.*

(3) *Turpentine and creasote* (4 to 1).

(4) *Turpentine and phenol* (4 to 1).

(5) *Absolute alcohol.*

(6) *Alcohol and phenol* (concentrated).

(7) *Oil of bergamot.*

(8) *Oil of sandal wood.*

Of the clearing agents and preparations of balsam, each has some special value: thus, if it be desired to stain with an anilin the clearing agent should be cedar oil, and the balsam should be dissolved in xylol; whereas if the material had been embedded in celloidin, then the clearing agent should be oil of bergamot.

All specimens mounted in a fluid, or in glycerine jelly, or Farrant's Medium, must have the edges of the cover glasses cemented with one of the following cements—

(1) *Dammar varnish.*

- (2) *Balsam in benzol.*
- (3) *Zinc cement.*
- (4) *R. Miller's caoutchouc cement.*
- (5) *Gellatin and bichromate of potash.*
- (6) *Hollis' glue.*

The order of procedure to mount a specimen in glycerine is—

- (1) To fix.
- (2) „ harden.
- (3) „ cut.
- (4) „ stain.
- (5) „ wash.
- (6) „ place in glycerine.
- (7) „ transfer to stronger glycerine.
- (8) „ cover.
- (9) „ cement.
- (10) „ label.
- (11) „ keep on the flat.

To mount in balsam the steps are—

- (1) To fix.
- (2) „ harden.
- (3) „ cut.
- (4) „ stain.
- (5) „ wash.
- (6) „ dehydrate.
- (7) „ clear.
- (8) „ mount in balsam.
- (9) „ label.
- (10) „ keep on the flat.

With regard to the machines used for cutting sections, these may be divided into those in which the material is raised, and those where the razor is depressed for each section; or they may be grouped into freezing microtomes, and those in which material which has been hardened by other means may be cut. To prepare material for a freezing microtome the hardening agent must first be removed by maceration in water for about twenty-four hours, then for a similar period it must be immersed in *gum mucilage* to which a little spirit of camphor has been added, the object of the spirit being to prevent the gum freezing in a crystalline form, and of the camphor to avoid the growth of fungi in the solution; the material is then ready for cutting. The gum, syrup, and bichloride of mercury may be used in exactly the same way.

When the tissue to be cut consists of very loose structure it is best to not merely embed, but to macerate in either *celloidin* dissolved in alcohol and ether, or in *paraffin* dissolved in chloroform. In the former case the material must be transferred from alcohol to a mixture of alcohol and ether, then to chloroform, from which it must be introduced into a thin solution of paraffin in chloroform, from which it may be passed into a warm and stronger solution, in which it should remain for a day or two, so that the whole of the tissues may become infiltrated with the embedding mixture. When celloidin is to be used the material should be passed from the alcohol and ether to a thin solution of celloidin in the same fluid, placed in a pill-box, and here it should remain with a bell glass over it until a thin scum forms on the surface; the box with its contents must then be placed in about 80 per cent. alcohol, when the whole mass assumes a cheesy consistence and is then ready for cutting. For embedding material to be cut by hand, either of the embedding mixtures numbered (1), (2), (3), (4), may be employed.

Mr. Groves then gave a demonstration of the methods of cutting and putting up sections for microscopic examination, and referred the Members for further information to "The Microtometist's Vade Mecum," by Bolles Lee; "Practical Histology," by Purser; and to "Bacteriology," by Crookshank.—(*Transactions of the Odontological Society of Great Britain.*)

A Proposed Dental Department at the Addenbrooke Hospital, Cambridge.

At a recent meeting of the Committee of Management of the Addenbrooke Hospital at Cambridge, the following report from the Weekly Board was read:—

"At a meeting of the medical officers held Dec. 8th, the following report was presented:—

"It was resolved to recommend the establishment of a dental department, to be in the first instance for two years from the time of the establishment.

"That two hon. dentists registered under the Dentists' Act, be appointed for two years.

"That the duty of each dentist be to attend the Hospital for one hour at 9 a.m., once a week each, on a day to be fixed.

"That the election of the dentists be in the same manner as that of the physicians and surgeons.

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“That the room hitherto used for dental operations be set apart for the dental department.”

“That the grant of a sum not exceeding £50 be made for the furnishing of the department.”

Dr. HUMPHRY moved the acceptance of the report. He remarked that the subject had been considered by the Weekly Board, and said that the reason of that report was that, of recent years, dentistry had assumed so much greater importance as a branch of study, and had become not only a matter of science, but of practice. It had also been a subject of legal consideration, and the Dentists Act had been passed, and the practice of dentistry legally recognised. As a result of that, dental officers had been appointed in many hospitals. He believed that in every one of the London hospitals dental departments had been established, as well as in the hospitals at Manchester, Liverpool, and Leeds. In certain other hospitals approaching more nearly to the size of Addenbrooke's Hospital, such as those at Durham, Carlisle, Oxford, Bath, and others, there was now a dental department, and dental officers, and seeing the great importance of dentistry, it was important that the benefits of that science should, if possible, be extended to a larger number of the poor in this district, and that the poor should have the advantage of the superior skill and science which those who were now so highly educated as dentists could give them. It was proposed, in the first place, that a dental department should be established at the Hospital, and it was proposed to constitute it for two years, which had been thought to be a proper time, though, at the end of that time it might be desirable to alter the system. It was also thought that there should be two dental officers, in order that there might be attendance at the Hospital on two mornings a week, and it would be known in the district that on two mornings dental officers would be in attendance at certain hours, for the performance of certain operations. Patients would not be precluded from coming at other hours, but it had been thought impossible that gentlemen occupied in practice in the town could attend, except at stated times.

Dr. COOPER asked if the proposed hours would be convenient for country people.

Dr. HUMPHRY replied that those people did not often attend, but chiefly townspeople. He also said that the dental apparatus in the Hospital was in a defective condition, and required renewal. It was necessary that chairs should be obtained, in which persons

could sit with as much comfort as could be expected [laughter], and an engine would be required for the necessary manipulation, as well as an apparatus for the administration of nitrous-oxide gas. He pointed out that the whole £50 need not be expended, and he moved the adoption of the reports.

The CHAIRMAN supposed that there would be an annual expenditure in the manufacture of gas.

Dr. HUMPHRY replied in the affirmative, but said it would not be great.

Dr. BRADBURY seconded the motion, endorsing all that Dr. Humphry had said.

Mr. MATTHEW moved, as an amendment—"That in view of the present financial position of the Hospital, the question of a dental department be deferred." He complained that the subject had not been brought before the Court of Governors earlier, and said that the funds of the Hospital did not show any superabundance of money, and were not likely to do so. He said that the establishment of a dental department would involve an immediate outlay, and an annual expenditure, and he thought that if the department was to be established, an appeal for a special fund might be made.

Mr. COCKERELL thought that if the Weekly Board had known that but for a donation of £250 the Hospital would have been upwards of £200 to the bad, they would not have agreed to the report. The Hospital had for years done without that department, excellent though it would be, and he thought that they should endeavour to economise, instead of increasing their expenditure. He seconded the amendment, with the suggestion that it should read—"That the reports be received, but that in view of the present state of the finances, the consideration thereof be deferred."

Mr. MATTHEW concurred in the alteration.

Dr. LATHAM thought that the present state of the finances was a strong reason for the establishment of the department in question, as if everything was done in the Hospital in the completest way, it would be the best claim they could urge for the general support of the Hospital by the town. They wished to treat the sick poor in the most efficient manner in all departments of the Hospital, and they should contrast the Hospital, in respect of a dental department, with other hospitals in the Kingdom. He mentioned that, considering the advance which dentistry had made, the institution

of such a department would be an advantage, not only to the poor, but also to the students, and said that it was of great importance to poor people that their teeth should be in good condition. If they lost their teeth, they soon fell into bad health, and possibly if people went more to dentists, it would lessen the efforts of physicians. If it was necessary to diminish the number of patients, let the entrances be restricted; but everything should be done in the completest possible manner.

Mr. FAWCETT said the argument about the shortness of money had for years been urged against every proposal which had been brought forward, and the Hospital had always been just paying its expenses. Unless the Hospital was kept up to its full state of efficiency, the subscriptions would fall off, and everybody expected that it should be kept up to the highest point of efficiency.

Dr. CUNNINGHAM said he knew of no branch of medicine or surgery which would bring a greater return for a minimum of outlay than dentistry. He observed that the proposed department did not intend to supply teeth, but only to relieve suffering, and to enable people to retain their own teeth. The annual cost of the department would be small, as materials, such as for filling teeth, were not expensive—it was the skill and experience of the operator which was costly; and that the Hospital got for nothing. He was confident that both physicians and surgeons would find the department to be a considerable help to them, and, hoping that that opportunity would not be allowed to go by, he said he thought Addenbrooke's Hospital would be enabled, in that respect, to rank among the first in the kingdom. If a special appeal could be made for that department, he thought that the present would be a good time to make one, and he had no doubt many sufferers would subscribe.

Dr. COOPER did not think that the Governors were in a position to adopt the reports, and he also imagined that £50 would not be sufficient for even preliminary expenses. He thought they wanted more detailed information as to the expense in the first instance, and also as to the annual expenditure which would be necessary.

Dr. HUMPHRY then replied. He said that the information contained in the reports had been carefully collected, that £50 was the maximum cost, and that the articles necessary could be got for less money than that. He mentioned that a dental chair could be got for £5. ["No."]

Dr. CUNNINGHAM said that was so.

Dr. HUMPHRY, continuing, said that the finances of the Hospital would always meet its requirements when real pain-relieving work was done. He wished that the good work of the Hospital could be doubled or trebled, and he was certain that, in that case, the necessary funds would be forthcoming. To postpone an expenditure of £50 would seem to be rather mean on the part of the Governors, and, seeing that such a department had been established at Oxford, he asked if Cambridge was to be behind Oxford in a thing of that sort. He thought the time had arrived for a measure of that kind to be adopted, and, replying to a question, he said that dental patients would not require a recommendation.

The amendment was then put, and lost, by ten votes against eight in its favour.

Dr. LATHAM then moved, as a further amendment—"That the word 'house' be inserted in the clause as to the election of a dental officer, as in the original report of the medical officers."

Mr. FAWCETT seconded the amendment.

Mr. COCKERELL opposed the amendment, and said that if it was agreed to, he would ask for a poll of the Governors to be taken.

Dr. HUMPHRY thought that the dental officers would consider it more honourable to be selected by a select committee, than upon a hap-hazard canvass of Governors.

Dr. BRADBURY said that the present mode of selection—the one proposed to be adopted in the case of dental officers—had been found to work admirably.

The CHAIRMAN thought it would be unwise to interfere with the privileges of the Governors generally, and he thought it would be wiser to leave the matter of selection in the hands of the Quarterly Court. As that meeting was a small one, he hoped that, if the amendment was carried, Mr. Cockerell would persist in his determination to demand a poll of the Governors.

A vote was then taken on the amendment, with the result that it was carried by seven votes for, to four against it.

A poll was then demanded by Mr. COCKERELL, and some conversation arose upon the demand. In the course of it the SECRETARY read the rule bearing upon the subject, from which it appeared that a poll could be demanded by the proposer and the seconder of a proposition only.

Mr. COCKERELL moved as a further amendment to the original Resolution—"That, as the Governors present to-day have overruled the decision of the nineteen Governors present on the 13th

of December, the further consideration of this question be deferred until the next Quarterly Court.

Dr. COOPER seconded the amendment.

A further discussion arose upon the amendment, chiefly upon a point of order, and ultimately

Dr. LATHAM suggested that the amendment which had just been carried should be rescinded, and the original motion of Dr. Humphry carried.

The suggestion was adopted, and the original resolution was put to the vote, and carried by twelve votes in its favour, and none against it.

The Court then rose.—*The Cambridge Chronicle.*

Poor Doctors and Doctoring the Poor.

MEDICAL attendance on the working classes, which was the subject of an animated Conference in London this week, is only one of a number of questions, all more or less mixed up, that have come to be of serious practical import for the private medical practitioner as a man of business, as well as for the givers and receivers of charity. Hospitals and dispensaries have multiplied on all sides, or have enlarged their facilities, some of them even boasting of the thousands of persons whom they attract to their doors to receive gratuitous physic and advice; and if this flowing tide of charity, so-called, has at length met with a check, it is not because doctors are weary of giving their services for nothing, but because the public are beginning to think that medical charity, like other kinds of charity, wants a good deal of careful organising, and ought to be subscribed to with a good deal of discrimination. This is one of those cases where the very first duty is to clear one's mind, and one's speech, too, of cant. No one really believes that medical students enter their profession full of humane enthusiasm, or that they are chosen from the rest of mankind by a sort of natural selection, owing to the strength of their benevolent instincts. The eager scramble of young doctors for unpaid posts at dispensaries and hospitals is well understood to be all in the way of business; and it can be said with perfect truth that there are some hospitals and dispensaries which exist for the benefit of the doctors first and for the patients afterwards. That does not mean, however, that the gratuitous patients are not individually well-treated; on the contrary, they receive no small measure of civility and consideration. But it means that the shadowy line between the rich and the poor has somehow, in the matter of sickness, come to be an artificial trench, or even a great gulf—a gulf which has gold

guineas on the one side and not even copper pence on the other. This very equivocal system of medical charity, as we now find it, has grown up silently along with the great industrial development. It is not so very long ago that the best hospitals had only two or three physicians and surgeons, and an apothecary ; now there is room made on the staff for a long list of seniors and juniors, of specialists, and of various supernumeraries. Whether it be that the demand of charity patients has created the supply of doctors, or that the demand of ambitious doctors has created the supply of patients, or that there has been a little of both, the fact remains that half the world has taken to going to hospitals for the "best advice" free of charge. For all this fantastic dance of charity the piper has had to be paid in one way or another. In one way the public have paid for it by subscriptions or donations, given out of warm benevolence or easy good-nature, or with more or less of reluctance, as the case may be ; in another way the rank and file of medical practitioners have paid for it, especially in the poorer parts of towns, by the disorganisation of their practice as a means of livelihood in the ordinary way of the world's business.

It is hardly possible to make too much of this state of matters in regard to national character, or to the elementary virtues of thrift and proper pride. It is not necessary here to touch on the whole doctrine of the use or abuse of charity ; but it has to be admitted that the easy access to hospitals and dispensaries has been in many cases a temptation to improvidence, and in some cases the first step downwards to pauperism. The danger was seen clearly enough by public-spirited men in the medical profession as long ago as 1830, and a number of isolated attempts have been made to meet it by Provident Dispensaries. The principle of a Provident Dispensary is that workmen earning wages, say less than thirty shillings a-week in towns, should make a very small stated payment in time of health, so as to ensure to them and their families the benefit of medical advice of their own choosing, and of physic, when sickness overtakes them, or when children are born to them. There has usually been an honorary fund as well, supplied by a few of the richer neighbours, which has served to pay the rent and some other expenses of the dispensary, and the cost of more expensive remedies. But the ordinary payments of the members have covered the cost of physic in general, and have left a more or less considerable sum to be divided *pro rata* among the attending or visiting doctors. Many members, by good fortune, have had little or no occasion to draw on the resources of the dispensary, and have thus indirectly contributed to relieve the less fortunate of their own class ; while every member has been consciously on such a footing as not to be the recipient of the rich man's dole. The dispensary doctors have usually found the truth of the maxim that services are most valued

when they are paid for ; and it has been only among a certain class of persons, who cannot be eliminated from any social contract, that they have discovered a wish to tax the resources of the dispensary unduly or unfairly. The system has worked well enough where it has been tried, and there are now in existence Provident Dispensaries of a good many years' standing ; but it has not been tried at all generally. The obstacles to it at present are well-nigh insuperable. It is hardly possible to enlist all the practitioners of a locality in the combination, and those that stand out, or get left out, are naturally in opposition. But the real difficulty has always been the existence of competing charity in the same neighbourhood—either a free dispensary or hospital supported by voluntary contributions, or the Lady Bountiful with a handful of patients' letters of admission for her *protégés*, or a pushing young doctor offering advice gratis at stated hours. Solidarity is a word of foreign origin that many people in this country have a not unnatural dislike to ; but for that we might use it to suggest the remedy needed in this particular field of social reorganisation. In plainer terms, the reason why Provident Dispensaries, like some much grander schemes, have not been the success that they were at one time expected to be, is that the world is still looking on at the old game of "Pull devil, pull baker."

The object of the Conference held this week at the instance of the Metropolitan Provident Medical Association, was to hear a free expression of opinion from general practitioners and others, as to the best way out of the present chaos and conflict of interests, without any prejudice in favour of the particular Provident Dispensary system with which the Association has been hitherto identified. The general practitioners were present in force ; some of them had grievances against the Provident Dispensaries in their neighbourhood, and all of them had loud complaints to make against the free dispensaries and the out-patient departments of hospitals. Even the Provident Dispensaries themselves, it seems, are unable to check the prevalent vice of fairly well-to-do people seeking the doctor's services *in formâ pauperum*. It is clear that the evil lies deep down in modern habits of thought and feeling ; and we may venture to remark that the leaders of benevolent activity have only a partial grasp of the problem. Perhaps the most difficult part of the whole matter is the existence of an extensive order of consultants and specialists detached by somewhat artificial barriers from the general body of the profession. The "best advice," in the out-patient rooms of a hospital, at all events, has an altogether fancy value put upon it. If the poor, or even the moderately well-to-do, only knew it, the "best advice" that they may spend half a day in scrambling to secure is no better than they would get from any fairly well-informed practitioner at a very moderate cost, and, under a system of sick

assurance, at a very small cost. For the great majority of the applicants no very superfine advice is needed. In a considerable fraction of them the homely medical skill which used to be handed down in decent families would enable them to dispense with the doctor altogether. Unfortunately, the tradition of it is dying out; and along with it the old-fashioned virtues of thrift and independence seem to have suffered some declension also. It is rather sad to think that the great expansion of industry and the rapid growth of cities have led to unwholesome developments of charity. One of the best aids to correcting a growing evil is to look back, and note where the error began.—*Evening Standard, Dec. 10th.*

ANNOTATIONS.

WITH this number we are sending out the revised list of members. Up to the last moment we are still receiving corrections, and we think it would be fairer to our Hon. Secretary, Mr. Canton, if gentlemen would pay attention to his very simple request and notify the change of address a little more promptly. Nothing surely is easier, and few things are more neglected. The annual volume of the Transactions also goes out with this number.

WE are pleased to record the inauguration of another student's society. On the 4th of November, at 71, Newhall Street, Birmingham, under the presidency of Mr. Charles Sims, the first meeting of the Birmingham Dental Student's Society took place. The meeting was well attended, and Mr. W. Palethorpe read an interesting paper, illustrated by diagrams, on "Extraction and its attendant accidents." On the 2nd of December another meeting was held, at which Mr. Miller discussed the Pathology of Dental Periostitis, and Mr. W. Madin read a paper on "Pivots and Pivoting," and Mr. Charles Sims showed a case of ranula; a large fibroma of the jaw and a specimen of the lining membrane of the antrum with an unerrupted canine tooth *in situ*. The Society will meet on the evening of the last Thursday of every month, from October to April. We most heartily wish them success.

IN the Annual Report of the Warwickshire Reformatory Institutions, we observe with pleasure that the Committee of Management, record their great sense of obligation to Mr Watt, of Leamington, for his professional services as dental surgeon to the institutions which he has gratuitously rendered for many years.

WE publish at page 54 an article, which appeared in the *Evening Standard*, which discusses in a very forcible manner the abuses that have grown up around the vast machinery of medical charity in England. It is quite possible that many of our readers may, on perusing it, be struck with the similar abuses to be anticipated in the working of our special charities. Nothing ought to be more zealously guarded against by those, to whom is entrusted the supervision of a hospital, than the danger that such an institution should absorb the *clientèle* who could well afford to pay and thus injure the present generation of rising practitioners. The abuse creeps in with such insidious subtlety that its possibility should never be absent from the mind of those who frame and revise the laws of our dental hospitals.

OUR members not unfrequently step out of the beaten track of every-day work to pursue some goddess of a different favour, and only the other day we learnt from the pages of the *Stratford-upon-Avon Herald* that Mr. John Humphreys, of Birmingham, had recently made a presentation to the Shakespeare Memorial of a series of interesting preparations, illustrating the flora of Shakespeare. The preparations were originally used as illustrations to a capital lecture on the subject, and display that kind of skilful technical delicacy which is the pride of our profession.

MR. GEORGE W. PARKINSON, the Hon. Secretary to the Benevolent Fund, requests us to state that he will be happy to receive the names of new subscribers, at 36, Sackville Street, and we would impress upon all our readers who are not already on the list, that subscribing to the Fund will do more than the best wishes to ensure Happy New Years.

MONTH by month the number of patients attending the Glasgow Dental Hospital has been steadily increasing, and last November the total reached between 700 and 800, nearly doubling the record of the previous January; this is the result of energy and good work. Ten students are already attending the hospital, which has only been open eighteen months.

JUST as we are going to press we have received a communication regarding a testimonial to our friend Dr. Waite, of Liverpool. We regret being unable to publish the list of subscribers, but hope

to do so in our next. Mr. T. Murphy, of Springfield, Bolton, is the treasurer, and Mr. I. Renshaw, 87, Drake Street, Rochdale, secretary. *Verb. sap.*

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

Foreign Diplomas.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Dr. Charles Cunningham is to be congratulated upon supplying the readers of your Journal, in its last issue, with a somewhat lengthy commentary on his former enigmatical communication. With regard to the first part of his letter, involving the ethics of the Anglo-American Doctor, as his remarks are directed more especially to Mr. Morton Smale, I leave that portion of debated ground to one who is well able to take care of himself.

With regard to the latter portion of Dr. Cunningham's letter, I feel called upon to say at least something in defence of what I previously wrote. And, first of all, I congratulate your correspondent upon his straightforward statement that the idea of a separate science of American dentistry is a "preposterous notion"; he is fortunate, indeed, in never having been pained by such reference to his profession. I have, and probably shall be again for some time to come, until the bubble bursts. But although Dr. Cunningham has admitted much, he still persists in using the term, "American dentistry," and says that "so far as it has any value" it "is simply a convenient expression to describe the practice of American dentists." Well, but if it be *convenient*, there should be no question at all as to its *value*. I deny its value to anybody except to him who would injure the English practitioner. Dr. Cunningham has only to spend a short time in London to find out in what direction the term is used; but as he is in blissful ignorance on the subject, perhaps he will not think it impertinent on my part if I attempt to throw a little light on the matter. I will only give two out of many instances. In the prospectus of a firm of advertising dentists, the following sentence ushers both the prospectus and its promoters to an unwary public:—"This Institute (*sic*) has been established to render accessible to the British public the advantage of genuine American dentistry." These public benefactors appeal for support to "those who have heard of the *general superiority* of American dentistry," and to "those who are dissatisfied with their own dentists or the old-fashioned methods." Let me also quote from a book which has been sown broadcast among the better classes of Londoners, published by a well-known firm, printed and illustrated in the most lavish fashion, and most lovingly dedicated to Englishmen, "With the authors' compliments." The avowed object of this gratuitous literature is to enlighten the public on some of Dr. Cunningham's much prized American "special methods," carried out, *of course*, at a "high point of perfection," and having attained the dizzy height of their "ultimate conclusion," to wit: crown, bar, and bridge work. The preface opens thus: "The object of the following pages is

to explain a system of preserving decayed, and supplying Artificial Teeth, which has been for some years in use most successfully in America, but has hitherto *not been introduced into England.*" The following sentence is a specimen of the value, vividness, and veracity of these model authors who champion American dentistry: "For the last thirty years in England dentistry has made little or no progress; but in America it has been slowly and steadily improving year by year, culminating in recent years in very great improvements."

It is needless to say that I have not a shadow of a suspicion that Dr. Cunningham sympathizes either with the sentiments or objects of such flagrant advertisements: but does he not lay himself open to the charge of unwittingly supporting these scandals upon his fellow-countrymen? I for one shall not be at all surprised if, in future advertisements of a similar character, the statement of Dr. Charles Cunningham in your Journal be quoted as the opinions of an *Englishman* in favour of "American dentistry" and "special methods." Should this disaster occur he will have no one but himself to blame.

Just a word or two with regard to the "special methods" which are carried out to their "ultimate conclusion" in the "foreign schools," where they turn out their students "complete masters" of our art. I am sure that your readers must be glad that, through the temerity of Dr. Cunningham, we now know definitely what the "special methods" are, and where they are to be found. According to "Nuttall" (I trust the authority is not too humble), the word "special," refers to "a species or sort," or what is "peculiar" or "extraordinary." In this sense does Dr. Cunningham mean to say that "cohesive gold, continuous gum, crown and bridge work, or the treatment of cleft palate on Kingsley's system," are in any way "special," to American Schools? Is he entirely ignorant of the fact that *all* these subjects are taught thoroughly at our English Hospitals (I speak for the London School of Dental Surgery, from absolute knowledge), theoretically, practically, and clinically? Are there any details of the Dentist's art—whether operative or mechanical—which are not in every-day practice in England? If not, in the name of common sense, what does Dr. Cunningham persuade his brain to believe regarding the meaning of the word "special"?

Your correspondent feels that any "unjust reflection upon the D.D.S. diploma, is calculated to annoy, if not injure, a considerable number of men." Let me repeat what I stated in other words, in a former letter, that the slightest reflection upon the genuine American graduate, does not exist in the minds of his English brethren. But we do believe that the English student should be true to the College that has done so much for his profession, and we think it high time that he should divest himself of the idea that there are any "methods" whatever of which his own country is destitute, but which may be acquired by crossing the Atlantic. By all means, let the student widen his experience as much as he will, but do not encourage him to obtain, at a small cost, either of brain or dollars, a foreign diploma by which he may assume a title which is certainly *misleading* to the British public, and with which he can adorn his brass plate, but not the Medical Register. Dr. Cunningham asks whether the Harvard degree, with a nine months' residence, is to be despised? Certainly not; but how many English Licentiates think it worth their while to spend that time in America? According to the Medical Directory for last year, there

are forty-two dentists practising in the United Kingdom holding American diplomas, in addition to the L.D.S. A few details regarding them are not uninteresting. They range themselves as follows :—

L.D.S.Eng. (of which 3 are Harvard men)...	...	...	5
L.D.S.Glasg. ... ..	...	...	5
L.D.S.Edin. ... ..	...	...	0
L.D.S.I (the majority are 1878 <i>sine curriculo</i> men)	...	...	31
L.D.S.Eng. (whose modesty (?) does not permit him to assume the title in the Directory ... ..	...	...	1
Total			42

The moral is obvious. Dr. Cunningham will forgive me for not varnishing such a plain surface.

I am, Sir,

Very faithfully yours,

E. LLOYD WILLIAMS.

London, Jan. 7th, 1887.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—May I be permitted to reply to Dr. Cunningham, on the subject of the American Dental Degree, *versus* the L.D.S.England. And let me commence by disclaiming any feeling of antagonism towards legitimate Schools of Dental Surgery in America.

I think it will be acknowledged by all, that the English dentist of twenty-five years ago learned many a good practical hint from his American *confrère*. Indeed, in the matter of careful manipulation, none could excel the late Dr. Marshall Webb, in gold filling; or Dr. Foster Flagg, in his conscientious [treatment of plastic fillings, so well exemplified in his thoroughly practical work.

And yet, what a wide difference of opinion is here. Wider even than the difference existing between the intelligent American and English dentist; which after all, is a kind of Tweedledum and Tweedledee.

Dr. C. Cunningham has raised some interesting points, and I will do my best to discuss them fairly and impartially; and first and foremost comes the question of the title of "Dr.," attaching to the holder of the D.M.D., or D.D.S., to those practising Dental Surgery in the United Kingdom.

I wish particularly to avoid all personalities, even if it be necessary to mention instances to give point to my argument.

I have only gone through the curriculum of the L.D.S.England, and feel strongly on the matter. We all know how foolish the public are, and how readily caught by clap-trap. "That great, big, *stupid* British public," as Thackeray so humorously called it, and we can recall old Thomas Carlyle's definition of the population of the British Isles, "So many millions, *mostly Fools!*" As a proof of this British foolishness, let me quote the words of an American dentist, who travelled England all over, anxious to obtain lessons on certain modes of mechanical work, and who called on the writer.

"I tell yew, sir," he said, "that in England I find the *advertising dentists* have their waiting-rooms best filled."

Now it is a well known fact that it is enough to be an American dentist, in the eyes of some foolish people. Let us suppose that two

men are practising in the same street. One man is an Englishman, and has, let us say, been house-surgeon or demonstrator to our London Dental Hospital, or some similar institution, and he holds the F.R.C.S. (by Exam.) and the L.D.S., and is on the staff of a hospital. Two doors off, his neighbour holds the D.D.S. of some American college. I will instance Philadelphia, as I was temporarily associated with a gentleman, since dead, who was six months in America, and saw a good deal of the country; he never had studied previously, or held a diploma, and yet he returned with his D.D.S., and practised under the title of Dr. ———. This I knew from the lips of the gentleman himself. Even in the case of a D.M.D., is it quite fair for him to put on his door-plate Dr. ———, and write in the third person. "Dr. So-and-So presents his compliments"? whilst practising *in England*? Why does he do so, unless it be a good advertisement?

Is he entitled to this apparent precedence of professional rank, and to take the same standing as the M.D. of London University, thus appearing in the same category in the eyes of the British public, from whom all have to get their daily bread?

If no, then why do we use the title Dr., in alluding to brethren amongst us who possess the American Dental Diploma only? in reporting our meetings, &c.

If yes, then let the English Schools see to it; for it will tempt fathers to send their children to American Schools, so that they may return to England as American dentists, and with the title of *Dr.* to help them along, as unquestionably it does.

The D.M.D. of Harvard is, I believe, a good, honest degree; but no one would suggest that it possesses a higher standard than the L.D.S. of England.

Why, then, is the Licentiate of the College of Surgeons to be placed *for life*, at a disadvantage with the American diplomatist? Surely it is well known that men who fail to pass the L.D.S. England, often go to America and obtain a degree. As for the practical part of the work, there are competent and incompetent practitioners, holding both English and American degrees. I will, however, say this, that if a young student *means work*, and goes through the curriculum for the L.D.S., at our London Dental Hospital, with such a dean as Mr. Morton Smale, and such a staff as its present teachers and demonstrators, it is ridiculous to suppose that he will not be *quite* the equal in *practical* knowledge, of the student turned out at the best of American Schools, and there can be no question as to his scientific education.

There is another point about this questionable title of "Dr.," and it is this, we are supposed to desire to be regarded as *specialists in surgery*. Yet is there any equivalent foreign diploma eagerly sought after by ophthalmic, aural, or other specialists in surgery?

If the leaders in pure surgery are contented with the title of Mr., does it not seem rather absurd that we should go to America for nine months, in order to obtain the title of Dr., which our honestly won degree of L.D.S. does not confer on the holder? And is it not more than absurd, when the dunce of the class, who is regarded here as a regular "chronic," goes across the water for a short period, and returns to wave his diploma of *Doctor* in the face of the student who has carried off all possible honours during his course of study for the L.D.S.?

I wish the legitimate American dental practitioner practising in

England to have every advantage possessed by his English brother ; but I do object to his preposterous assumption of superiority, from the fact that the *wording* of his diploma (this is the key to the whole matter) conveys a grander idea to minds unprofessionally educated ; one is doctor, the other licentiate, in dental surgery.

I have already pointed out that the weakest of American dental degrees confers the title of *Dr.*, and Dr. Cunningham remarks :—" I think our American friends would speak in very unflattering terms of those who suppressed their diplomas in deference to the wishes of jealous *confrères*."

Can he seriously mean that the holder of the F.R.C.S.England, can possibly be *jealous* of the D.M.D. or D.D.S. of America ? though he may feel it an injustice that the latter is allowed out of courtesy the title of *Dr.*, whilst the Englishman is, in his own country, still addressed as *Mr.*

I hold it to be an injustice to the licentiate, and still more to the member and fellow of the College of Surgeons of England, that the title of *Dr.* should be the peculiar privilege of those who have spent only a comparatively short period of their professional career in America ; or even if their whole career has been passed in an American School.

Of course it would be possible to play checkmate to this, by conferring the empty title of *Dr.* on the holder of the English degree ; but by doing this we should lose our status as members of the medical profession, and only benefit by giving the public the erroneous idea that we possessed the really splendid degree of M.D.Lond., a very different affair indeed.

If, then, the title will not bear inspection in English minds, how comes it that American dentists are in the habit of calling themselves *Dr.* whilst practising in England upon a purely American qualification, even if it be the D.M.D. ?

The advantage in practice, in plain English, *in money making*, is so obvious, that it would be a waste of time to do more than allude to it. We are all willing to acknowledge the energy and ability of very many of the dental surgeons in England who hold one or other of the American diplomas, and we honour their pre-eminence in certain branches of our art, but we can hardly feel other than agrieved at the assumption of a foreign diploma, in no case superior to the diploma in dental surgery of our own College of Surgeons, and not unfrequently infinitely inferior, which gives to the possessor the apparent precedence in professional status which the public always supposes to attach to the degree of *Dr.*, D.M.D. or D.D.S., the "*omne ignotum pro magnifico*," which puzzles and pleases the vulgar. I have long desired to ventilate this question, *for it concerns not only ourselves, but our children's children*.

The public, after all, are our patrons, and it is naturally to them a proof to begin with, that the possessor is a qualified practitioner, if he places on his door the title of *Dr.* —, and writes to his patients in the third person, &c. The modest title of *Mr.* must suffer in comparison, and when all initials are suppressed must suffer a good deal.

Now if a *superior degree* entitled the holder to use the title of *Dr.* that would be another matter ; but this is not contended, and it would not bear contention. A D.D.S. coming to England, dubs himself *Dr.* —, puts it on his card, &c., and the public take it up, swallowing

the bait eagerly, and asking no questions. Therefore I hold that, even the D.M.D. is, though registered, not entitled to assume, *in England*, that which even the highest *surgical* diploma does not entitle a man to use, the high sounding name of *Doctor*!

I am sorry to disagree with "Dr." Chas. Cunningham, but the matter is too important in my eyes to allow me to remain silent. This is a wide question, into which personalities, of no kind or description, should be dragged, and it is one I have often heard discussed.

I hope the subject may be taken up, and fairly and temperately discussed, in the pages of this our Journal. I am, &c.,

Brighton.

E. M. TOD.

A.C.E. Mixture.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I should be glad to know of any experience that your readers may have had with the A.C.E. mixture in conjunction with nitrous oxide gas. I have occasionally seen symptoms of an epileptiform character when giving ether and gas in combination, more especially with very young and elderly patients. I am aware this is not unfrequently seen when gas alone is administered, and in my experience it has happened *less* when gas and ether has been given; still if these symptoms could be entirely eliminated, it would, to say the least, be a source of considerable comfort to the sometimes over-taxed nerves of practitioners. Believe me,

Yours most obediently,

Meadowcroft, Redhill.

ALVERSTONE GABELL.

Soldering Platinum to Gold.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I have lately got over the difficulty that has hitherto accompanied soldering platinum to gold by the following little dodge; namely, previous to soldering the platinum to the gold, I melt a small piece of pure gold on that part of the platinum that is intended to come in contact with the gold plate, after which it can be easily soldered effectually to any quality gold plate. I enclose a specimen.

When in London at the Association meeting, I mentioned it to a few intimate friends, but it is sure to become more generally known through the medium of our Journal. Mr. Jamieson of the Depot in Broad Street, Golden Square, suggested that if the platinum were gilded it would do as well. I have never tried his suggestion.

Yours truly,

1, St. Andrew's Place, Plymouth.

ELIAS L. KEYS.

[The result is perfect in the specimen submitted.—ED. *J.B.D.A.*]

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their Subscriptions for the current year were due on the 1st of January, and should be remitted to the Treasurer, at 40, Leicester Square.

According to the Bye-laws of the Association, Members who are one year in arrears are not entitled to receive the Journal.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

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The Title of Doctor.

THE propriety or expediency of the employment of the prefix or title of Dr. by dental surgeons practising in the United Kingdom, has, recently, owing to some able and forcible correspondence upon the subject in our pages, become a burning question. And, seeing that in almost every case the title is employed by virtue of an American diploma, the kindred question of foreign diplomas and their value and status has become involved in the discussion.

It is obviously important that the question should be divested of every semblance of personality, and we have received ample assurance that our correspondents one and all desire to attack abstract principles and not special individuals. It will also be advantageous to avoid all acrimony in the debate of so delicate a subject.

Before saying anything upon the direct merits of the question, we shall endeavour to clear away some elements of confusion that only tend to obscure the real issues.

To begin with it should be clearly understood that the only law that can be appealed to in the attempt to decide the right of an individual to style himself doctor, is the law of good or bad taste. Public and professional opinion may condemn the practise, but since the prefix by itself has no legal meaning any more than the title "professor," therefore it may be, and is, assumed with equal impunity by conjurors, prize-fighters, itinerant phrenologists, or by anyone else who thinks it may add a lustre to his name and raise him in the public estimation. What nobody can legally do is to append to his name a title he does not possess, such as M.D.Lond., D.D.Oxon., or any other such defined degree.

Again we would remind our correspondents that an English surgeon whether dental or general does not refrain from assuming the title because he has no right to it, but because he would consider it derogatory according to the canons of taste in his own country (as our correspondent M.R.C.S., L.D.S., points out). Fellows of our English College of Surgeons, who may possess additional titles conveying the appellation according to usage, would never dream of dubbing themselves doctor while practising pure surgery, and it would be quite the reverse of a compliment to address such surgeons as "doctor." It must at the same time be borne in mind that among English dental surgeons of repute there is not an absolute unanimity of opinion upon this point, for whereas some who possess English, Scotch, or Irish M.D.'s, prefer to be addressed as Dr., others under the same circumstances refrain from employing the title. And with regard to the precedent of the medical profession at large, it is not impossible that

the present practise may be modified in the future, and that the title may come to be more widely employed among general practitioners than is the case now, although it is never likely to find favour with operating surgeons.

On the other hand in America, the title conveys a distinct meaning, and is the proper appellation of a qualified practitioner, and naturally enough (before this question had even been raised) those who had been accustomed to employ the title in that country continued to employ it in this. Among the profession therefore and probably among the educated public, the assumption of the title has hitherto been taken to imply an American education and diploma. How far the suggestion of a foreign education and diploma, would seem to be a recommendation to the average English patient we do not really know. The profession who are behind the scenes need only glance at the table of foreign diplomas at the end of Mr. Lloyd Williams' able letter (BRITISH DENTAL ASSOCIATION JOURNAL, p. 61, January 1887), to see what the distinction really means, and we cherish the hope that day by day the public will become more educated and better able to appreciate the true worth of our English diploma, the thoroughness of the curriculum that is required, and the searching nature of the ordeal through which candidates must pass to obtain it.

No one who relies upon a scientific education and a proper professional morality to conduct his practice and earn his daily bread, can fail to share the disgust and contempt evinced by our correspondents for those who assume the title as a bait for the unwary, upon the strength of a bogus diploma ; and our highly respected American friends over here must feel, even more acutely than we do, how deeply these so-called Americans disgrace the profession. Of course we know well enough what the value of all the bombastical trash about "special methods," and "things not

taught in England," &c., really amounts to ; we know, and the educated Americans know, that every department of sound practice is worked out in as great perfection here as anywhere in the world. Moreover, we know that most of the advertisers and catch-pennies in question are ignorant of every department of dentistry except, perhaps, the financial department—in the conduct of which they do certainly employ a "special method;" long may it be confined to them.

The contention of one of our correspondents is that the title "doctor" does impose upon the public; that it conveys a false impression, namely, that the holder is specially qualified, which is, of course, not the case, and that the licentiate of the United Kingdom labours under a disadvantage, because the uninformed and unthinking (who are a majority) wrongly suppose the absence of the title to imply inferior culture and skill. If this be so—and the impression is shared very widely among our professional brethren, especially in the provinces—then it is high time to educate the public. Meanwhile, we think that those of our *confrères* who with perfect technical right and with unimpeachable motives have hitherto employed the prefix, will do well to ask themselves whether it would not be a preferable course while practising dentistry in this country, to follow the custom of the *élite* of the profession here and discard a meaningless title, which however honourable in another country, is becoming here in England, every day more and more associated with practices of which we are all equally ashamed. We gather from our correspondent who represents the other side of the question (p. 122), that he agrees to the fairness of this suggestion. The practise hitherto has varied, and we have no power to lay down hard and fast laws, but the discussion carried on in our pages will, we hope, produce one beneficial result, namely,

that after due reflection dental surgeons practising in England will agree to adopt a unanimous line of conduct in this particular. We must agree as to what is right and act accordingly. Let those who possess the degrees prefer to be known as —, Esq., D.D.S., or —, Esq., D.M.D., and leave the prefix of Dr. to those who from vanity or the absence of a *bond fide* qualification of any sort are driven to adopt it.

Sir James Paget on the Future of Pathology.

THOSE of our readers who do not regularly see the medical journals will, we are sure, be delighted to have the opportunity of perusing the instructive and suggestive address—printed in another column—which was delivered at a recent meeting of the Pathological Society by its new president, Sir James Paget. Like all the utterances of its author, one of the most gifted in eloquence, as well as most highly cultivated and philosophical of living men of science, the address is likely to prove a treat to those who appreciate literary elegance. But its main value consists in its exposition of the true method and means of pathological research, and of the spirit in which such research ought to be conducted. We are all aware of the dangers of the use of the imagination in scientific research and speculation—at least they have been sufficiently discussed and pointed out—and there are probably few individuals who are ever able to venture upon such kinds of speculation without danger. Could anything however be more charmingly put or more true than the ideas projected in the last paragraphs of Sir James's address? If scientific workers, or rather workers in science, who are not really competent for their adopted task, would only take to heart teaching such as this, a vast amount of now wasted force would be saved and vast volumes of

useless medical literature, bewildering to the student, wearying to the older reader, either would not be produced or would remain in the obscurity from which it does not deserve to be drawn.

ASSOCIATION INTELLIGENCE.

West of Scotland Branch.

THE usual monthly meeting of the West of Scotland Branch was held on Thursday, January 27th, in the Faculty Hall, St. Vincent Street, Glasgow; W. R. BROWNLIE, L.D.S., Eng., president in the chair.

Mr. W. S. Gillespie, L.D.S., Glasgow, 248, Sauchiehall Street, Glasgow, was balloted for, and unanimously elected a member of the Branch.

Mr. Matthew Dicorie, 25, Westminster Terrace, Glasgow, having been elected a member of the British Dental Association by the Council at a previous meeting, was proposed for election into the Branch.

Mr. W. S. WOODBURN then opened the discussion on Hydrochlorate of Cocaine, and its use in Dental Surgery. He spoke favourably of its use as a local anæsthetic for the extraction of teeth, having had a considerable number of successful cases. One or two of these had given him some trouble, but he was not satisfied that this was due to the cocaine. He had found it most useful when applied to exposed pulps, prior to the application of an escharotic. He recorded a number of cases, and recommended care in the administration of the drug.

Mr. CUMMING said :—My experience of it is not so extensive as Mr. Woodburn's, nor has my success been so great. I will briefly relate two cases, as they contain the best and the worst in my experience.

A lady of twenty-five years required twenty-one teeth, or their remains, extracted. The first three I extracted *painlessly* with nitrous oxide gas. Two days after I began with cocaine, and used it till all were extracted. The first day I extracted two lower molars and two bicuspid, injecting the cocaine somewhat after the method of Mr. Hunt, of Yeovil, and used two grains. Patient felt pain, but said she thought it much less than if nothing.

in the way of anæsthetics had been used. Three days later I extracted from upper wisdom tooth to first bicuspid inclusive (left), using *three* grains with no bad results to the system, but pain accompanied all the work more or less. I found invariably that whenever inflamed tissue was punctured for injection the pain was great, and the pain of extracting great, as much, I believe, as if no anæsthetic had been used. Four days later I extracted from right upper wisdom tooth to right central inclusive, and also left lateral, using *three* grains of cocaine. This lady had, therefore, in seven days seven grains, with no bad effect to the system.

The next case is quite a contrast to that, and as I was fortunately the victim myself I can describe all the feelings minutely.

After the lady's case I had no hesitation to use the drug for the extraction of my two upper central incisors. Years ago a pulp extractor was broken into one, the canal was filled as well as possible, but a fistula soon appeared, and lately was so troublesome that I resolved to have it and its neighbour out, and to use cocaine. A grain was prepared, and half injected at apex of each. The puncturing pain at fistulous tooth was excessive, the other almost none. A drop or two of cocaine came through the fistula and fell on my tongue, but as soon as the needle was withdrawn I wiped it off my tongue. Before the second half could be injected my upper lip puffed up, and my tongue had a peculiar sensation, as if scalded with something hot. After two minutes waiting the teeth were extracted, the fistulous one first, and more painful than the other; and each as painful as any tooth I have had extracted (fifteen in number, and all till now without anæsthetics). I gave a sigh of relief, thinking all my trouble over, but my lip swelled more, and was, like my tongue, as alive to sensation as any part of my body. I felt a peculiar sensation creep over me and go up to my brain and then down my neck, and into both sides of my chest. I then rose up and shifted my seat for relief, my son remarking that I looked pale. I laid down, but my heart got so irregular, and the beating so peculiar and painful, that a doctor was sent for. My legs, feet, and hands got cold, and warm water bottles had no effect. A feeling of tingling all over the body, and especially at my fingers and toes, combined with a great desire to void urine, but had not the power, and also great noise in breathing. This continued for two hours at least. A doctor did not arrive for more than one hour after being sent for. He ordered a hot poultice to the stomach, and a drink of

hot coffee to induce vomiting, which it did to a small extent ; nothing came up but a few bits of undigested apple, eaten an hour before the injection. The effect of the poultice and coffee was to relieve the tingling, and cause a feeling of warmth to return. The cocaine was administered on December 26th, 1886, at 2.30 p.m., and for two days I was almost prostrate and almost without sleep ; the irregularity of the heart continuing, and so making me restless. My lip was in a puffy state for days, but no swelling about my gum.

My temperament is nervous, and to compare it with the lady, whose case I previously related, it must be wonderfully so. I may state, however, that I am more than twice her age.

Many patients may be as nervous as I, therefore I state my case fully, so that my fellow practitioners may be on their guard, and know from my experience that cocaine is not free from danger. I shall sit down after putting one question : Is it known if over heating while dissolving the drug in glass tube would change its nature ?

Mr. JOHN MELVILLE said : My opinion of the value of cocaine as an anæsthetic in tooth extraction is of the most favourable character, and the results of its use in all the cases to which I have administered the drug have given entire satisfaction, both to the patient and myself. Out of twenty operations, I have had only two what may be called failures, and they were caused from my not allowing sufficient time to elapse between its injection and the operation, and I have been taught by experience to allow at least three minutes to intervene, so as to enable the drug to reach the nerve filaments of the lining by one operating. And I think it of importance to introduce the injector at a point where the liquid will have the best chance of manifesting its anæsthetic properties, and I think the best results are to be gained by inserting the point at the border of the process close to the neck of the tooth, and pushing well through between the gum and the socket till about the middle of the root. Before depressing the piston, I think it also advisable to keep a pad of bibulous paper between the lip and the gum, so that if there is any escape of the cocaine, it may be prevented from coming in contact either with the tongue or lips, or mixing with the saliva and ultimately getting access to the stomach ; which, if it did, might give origin to those disagreeable and alarming symptoms, which Mr. Cumming observed in his lady patient, and likewise experienced personally after having a tooth extracted under the influence of cocaine.

Mr. REES PRICE remarked that he had used cocaine in a large number of cases for the extraction of teeth (some 60) with somewhat varying results. He concluded from this experience that cocaine was really of great value, since in most cases the result of its use was absolute painlessness, of this he was completely satisfied—but he was not so sure about after effects. He had injected three grains at one sitting, and had not heard of any untoward result. But as there was some difference of opinion upon this point, he suggested the advisability of recording cases. Mr. Rees Price also mentioned that he had found cocaine useful in the extraction of dental pulps, by previous injection. As an obtunder of sensitive dentine, he had found it useless.

The discussion was continued by Messrs. J. A. Biggs, Dall and Cumming (Falkirk), who spoke favourably of the use of cocaine.

The PRESIDENT, in bringing the discussion to a close, remarked—

That which has most interested me in the use of cocaine has been to find some explanation of the extent to which its action seems to vary.

Making all due allowance for the “nervousness” on the one hand, and an excess of politeness on the other, by which the answers of patients are more or less highly coloured, it still remains to me a very uncertain agent, and with the exception of two classes of cases, I am quite unable to predict the result. The cases which have constantly resulted at the best in partial insensibility, have been those where there has been inflammation of gum and membrane, and the result as regards painlessness has been in inverse ratio to the degree of inflammation.

Those cases which have been successful almost without exception have been children and young people from fourteen years and under, and where there was no inflammation of gum or socket. I have not used more than a grain at a time, and allow from three to five minutes.

A vote of thanks was recorded to Mr. W. S. Woodburn, for his kindness in introducing a subject which had so greatly interested the members.

The next meeting will be held on Thursday, February 24th, when a communication will be given by Mr. W. Bowman Macleod, L.D.S. Edin., on “A case of Alveolar Necrosis.”

Central Counties Branch.

A MEETING of the Central Counties Branch was held at 71 Newhall Street, Birmingham, on February 3rd, the President, Mr. Breward Neale, in the chair, and there were present Messrs. F. J. Thomson, F. H. Goffe, C. Sims, W. A. Vice, N. Owen, W. R. Roberts, F. W. Sutton, G. J. C. Matthews, W. E. Harding, G. O. Richards, E. J. Hordern, F. P. McCulloch, J. S. Crapper, G. D. Orrock, C. D. Marson, F. W. Richards, H. N. Grove, J. W. Roberts, F. E. Huxley and Clifford Batten.

Mr. Frank Huxley read a paper, entitled "Notes upon Exostosis," which was illustrated with numerous specimens, and elicited considerable discussion, in which Messrs. Harding, G. O. Richards and J. W. Roberts, Clifford Batten, and the President took part.

Mr. W. Reginald Roberts, of Lichfield, contributed a paper upon "Nitrous Oxide Gas and its Administration," and in the subsequent discussion, Messrs. Sims, Crapper, Harding, Owen, C. Batten, J. W. Roberts, and the President engaged.

Both papers were the result of careful practical observations, and hearty votes of thanks were accorded the authors.

Dr. Crapper exhibited specimens of a new method of working plate with vulcanite, and gave a detailed description of the process. He likewise exhibited for the Dental Manufacturing Company an improved mouth lamp.

Mr. Breward Neale also showed specimens of similar work.

The next meeting will be held on Thursday, March 24th.

ORIGINAL COMMUNICATIONS.**The Medical Treatment of Dental Abscess.**

BY A. C. ROPER, M.R.C.S.Eng., L.R.C.P.Edin.

WHEN I was invited by your President to read a paper to you at this meeting, I had considerable diffidence in accepting his invitation, since it is not an easy matter for a man engaged in general medical work, to find a subject in which he is by experience and practice qualified to inform men engaged in a distinct speciality of which he knows but little. In the matter of the surgical treatment of dental abscess, each and all of my listeners are infinitely better qualified to speak than I am; but I know that there is among the public which provides your patients and mine,

a large number of nervous and frightened folk, who will accord heartfelt thanks and unlimited praise to the man who can save them the pains, oftentimes more mental than physical, though none the less real, of a surgical operation, however trivial. For the purpose of the present paper, I propose to divide the pathology of dental abscess into three stages. First, the hyperæmia, whether of pulp or of peridental membrane, which marks the first stage of the inflammatory process; second, the exuding stage, in which from the gorged and loaded blood-vessels, in a condition of stasis, the white blood corpuscles and serum, exude through the distended walls; and thirdly, the purulent stage, in which the pus is formed, which will presently burrow through opposing structures, absorbing them as it proceeds, until it reaches the mouth, cheek, or even such remote and distant places as the neck and chest.

It is my wish in this paper to bring especially before you two drugs which I have frequently employed with marked success, both in my own case, for I am endowed by nature with a set of teeth which have occasioned both your President and me, I think I may say trouble and pain respectively, and for my patients. The drugs are gelseminum and sulphide of calcium, but before proceeding to discuss them I would remind you that nothing will give such prompt relief in the painful malady under discussion, if taken in the first stage or beginning of the second stage, as a leech applied over the root of the tender tooth. This acts, as I can testify, like a charm. The teaspoonful or two of blood which it withdraws, followed by the hæmorrhage, which naturally ensues from the wound, empties the vessels, encourages the absorption of any exuded matters and allows the vessels and capillaries to resume their normal calibre. A typical case for the employment of a leech is that in which the peridental membrane is alone inflamed—if one can with anatomical accuracy say “alone” of a membrane so intimately connected with the pulp through the crusta-petrosa on the one side, and with the alveolar process on the other—and the diagnosis of this condition will depend chiefly upon the character of the pain, which is in periodontitis of a dull and constant character when pressed upon by the other teeth. At this time, too, a momentary cessation of pain may be noticed if the patient will bite hard on the painful tooth, caused, I imagine, by the forcible pressure thus brought to bear on the inflamed membrane emptying the vessels for a moment, the pain returning with the cessation of pressure with a throb, throb, throb, synchro-

nous with the pulse as the vessels refill. I have thought that I could tell in my own case that the pulp was inflamed, not only from the severity and throbbing character of the pain, but also from the fact that this pressure lessened it in degree. But I suppose that it is with your practice as with mine that you only rarely see a case in its earliest stage. People think that it will pass off, and they feel that they will bear a good deal before they seat themselves in that luxurious chair of most uncomfortable memories. Worn out, however, by a night of toothache, the courage of despair drives them to their best friend, often, as I have found, calling on the doctor, *en route*, to know whether they are well enough to go to the dentist. You find them with a swollen gum and face, a tender tooth, and pains, centralised it may be in that tooth, or radiating to such an extent as to involve all its neighbours in its own or opposing jaw.

Here clearly the leech will be insufficient, although it will even now assist you; but can nothing be done short of an operation? I think, yes. Pain is the first thing in your patient's mind, and is undoubtedly the first thing to be relieved. Is there any caries in the offending tooth? If so, plug the cavity with cotton wool soaked in a weak solution of cocaine—four per cent. is quite strong enough. That will materially diminish the suffering, and can be renewed every half-hour as required. But then there is the radiating ache extending perhaps up the temple, and certainly into the ear, can you do nothing for it? Gelsemium, prepared from the rhizome and rootlets of the flowering American jasmine, is a powerful drug which has long enjoyed a reputation in America as a remedy for facial neuralgia, but which has only just found its way into the British Pharmacopœia, though we have used it in England for years, and which acts especially on the second and third divisions of the fifth nerve. I say it is a powerful drug advisedly, for if given in sufficient quantities it is a poison which paralyses through the spinal cord causing asphyxia. We need not however be afraid to use it on that account, as in man there are well marked symptoms of giddiness, heaviness of the head and eyes, double vision and drooping of the eyelids produced by a far smaller dose than that which produces general paralysis. In this respect its action is different to what obtains with the lower animals in which the respiratory centre is first acted upon.

In prescribing this drug, I should order for an adult thirty drops of the tincture in a glass of water, to be repeated hourly

until its physiological effects are produced. Sometimes the first dose will produce symptoms, and Ringer records a case in which ten drops produced well marked ptosis, or drooping of the eyelid. Having repeatedly taken gelseminum myself, I can describe to you the symptoms it produces when you have had enough. First a feeling of drowsiness and heaviness of head, not unlike that experienced after a narcotic dose of opium. Sleep, however, does not seem to result, but presently the most peculiar and characteristic sensation of double vision supervenes. It is transitory, lasting but a few seconds, coming on every few minutes, and making one feel that one must be squinting, although I have not observed a squint in any one who has complained of it to me. I am in the habit of prescribing this drug in doses of from ten to fifteen drops largely in ordinary cases of neuralgia of the head and face, and with great success. But I usually tell my patients to lie down for an hour after taking their dose, as I have known them to be somewhat disconcerted at the effects. It is, therefore, well to inform an intelligent patient of what they may experience, and, indeed, what they probably will experience, as speedy relief from severe toothache will rarely be attained without some of these symptoms. But the relief of pain will be only temporary, and unless the leech has been applied sufficiently early, and so has given the distended vessels time to recover their elasticity and resume their normal calibre, the relief which the gelseminum will afford will land your patient in a fool's paradise, as with the progress of the inflammation, or, as it has now become suppuration, the increasing tension, will cause pain in spite of your remedy. What drug is there then that will arrest the suppurative process of the third stage, whilst your sedative is deadening the nerve pain which the process is occasioning. Sulphides have a special power of preventing and arresting suppuration, and even, as would sometimes appear, of causing the absorption of pus, or, at any rate, of the inflammatory products which would soon become pus.

There are several salts of this group in the pharmacopœia, but the most convenient for our purpose is the sulphide of calcium which, if given in the dose of $\frac{1}{10}$ of a grain every hour or two will beneficially affect the inflammatory process. It is best given in a small chalk coated pill, as its smell is very powerful and offensive. I have seen a large and pointing gumboil entirely recede under this treatment, and I have no doubt of its service, although no

knowledge of its *modus operandi*. Occasionally, of course, gum-boils disappear by themselves, but my opinion does not depend simply on its action in inflammations of the mouth, for its principal use in medicine is probably its almost wonderful effect on enlarged strumous glands, which, if they have not already begun to suppurate, it causes to diminish in size, or if suppuration has begun, it causes the abscess to mature in a few days, instead of lasting many wearisome and painful weeks ; and then to discharge healthy pus and heal rapidly, instead of the many weeks or months for which we have been accustomed to wait, whilst an unhealthy sort first hesitates and then slowly heals when the patient's health has been restored by tonics and treatment. It will be necessary to continue the sulphide for three or four days—allowing longer intervals to elapse between the doses as its effects become apparent—to ensure its full success, whilst the gelseminum need only, of course, be given as the pain requires. Indeed, the sulphide itself has such an influence over the pain of periodontitis, that probably the first two or three doses of gelseminum will be all that are required.

In conclusion, I would say that I do not claim that all cases of dental abscess will yield to the treatment which I have tried to sketch, and that the cases in which the least good results will obtain are those in which there is an absolute spliacelus of the pulp ; but even in those cases the pain will be considerably mitigated, and the maturation and discharging of the abscess must hasten by the exhibition of the drugs which I have ventured to bring to your notice.

HOSPITAL REPORTS AND CASES IN PRACTICE.

On Local Anæsthesia for the Extraction of Teeth.*

By GEORGE VIAU.

THERE exists in Bolivia and Peru a shrub of the family Erythroxyton, known as the coca plant. The leaves of this shrub possess an aromatic and agreeable odour, and have for a long time been used by the natives of South America, either for chewing, or for the preparation of infusions. The Indians strongly appreciate

* A paper read before La Société d'Odontologie de Paris, on the 12th October, 1886.

the curious property possessed by the juices of this plant in calming the sensation of hunger, by producing anæsthesia of the gastric mucous membrane. For a long time also tonic properties have been attributed to its leaves, for which cause they have been employed in the manufacture of various well-known wines. In 1859, a German chemist, named Niemann, succeeded in extracting an alkaloid from the leaves of the coca plant, to which he gave the name of cocaine or Erythroxlin ($C_{17}H_{21}Az. O_8$). In 1862 Echroff discovered that this alkaloid produced insensibility of the buccal mucous membrane. More recently Koller, of Vienna, found this anæsthetic property extended to the mucous membrane of the eye.

At first employed by oculists for painful operations, cocaine and its various salts very quickly came into general use. Many physiologists having closely studied its properties, doctors and, more especially, surgeons, became accustomed to use it, and very soon cocaine was recognised as a local anæsthetic of incontestable value for the following mucous membranes: the conjunctiva and cornea, the Schneiderian or pituitary mucous membrane, the buccal and laryngeal mucous membranes, and the mucous membranes of the alimentary and digestive tracts, and of the genito-urinary organs. In fact, its application became more general day by day.

Dentists were speedily interested in this new drug, hoping to realize the long cherished dream of a perfect local anæsthetic agent for the extraction of teeth.

The first experiments made with this hope were not, it must be owned, very satisfactory. The greater number of experimentalists thought the anæsthetic action of cocaine was limited to the mucous membrane, and could not extend to the nerve filaments situated in the subjacent denser tissues. The general opinion was summed up by M. Dujardin Beaumetz, who, quoting MM. Galippe and Magitot as his authorities, affirmed that cocaine was never of the slightest use in dental operations.

In spite of this unfavourable judgment, many of the professors of the Dental School at Paris used cocaine experimentally at their clinics during the last months of 1885, and the first months of 1886. Dr. Aubeau, among others, obtained incontestable successes by the local application of pledgets of cotton-wool saturated in a 5 or 7 per cent. solution of cocaine, which application was occasionally followed by the use of the ether spray. In

every case where the tooth was loosened, or a certain amount of alveolar absorption existed, the anæsthesia was complete. Dr. Aubeau even injected cocaine beneath the gums, but the solutions used were too weak, so that the results were only partially successful (vide *l'Odontologie*, January, 1886).

Following up these experiments, I applied this method in my private practice, and the results obtained were sometimes completely successful and often satisfactory, but were always encouraging.

In September, 1886, M. Telschow introduced Witzel's method to the clinic of the dental school at Paris, and surprised us by his uniform success. In every case anæsthesia was complete or sufficient, even when the operations were difficult and of long duration.

Nevertheless, these experiments left me full of doubt: two out of eight patients experienced constitutional disturbances of an alarming nature, some of the others felt a general malaise of a less marked character, but sufficiently severe to render some amount of caution necessary. From this time, the question that occupied my mind was to find, if it existed, the minimum quantity of cocaine that could be safely used. That is to say, a dose capable of producing local anæsthesia without provoking those constitutional disturbances remarked by all who were experimenting with this method of producing insensibility. But the question so propounded was, in a manner, answered beforehand. Dr. Aubeau had used in his experiments a 5 per cent. solution, that is to say, each of Pravaz's syringes, containing a gramme of distilled water, only included 5 centigrammes of cocaine, an insufficient dose in cases where the roots were solidly implanted within the alveolus. M. Telschow injected 10 centigrammes of cocaine, evidently too strong a dose, as in a certain number of cases it was followed by constitutional disturbances. I had, therefore, to choose a medium between 5 and 10 centigrammes of cocaine. But then another idea flashed across my mind. I decided to associate a second local anæsthetic with the weaker 5 centigramme dose of cocaine, which should combine its own action with that of the cocaine, without reacting on the system of the patient. This second substance was carbolic acid.

M. Telschow slightly carbolised his solution of cocaine to sterilise it. Personally, I see in carbolic acid an agent of importance in another sense. All who use this acid, either pure or concen-

trated, are well aware of its anæsthetic properties. It is the anæsthetic par excellence for sensitive dentine. It was Professor Poinsoy who drew attention to this fact. This anæsthetic property of carbolic acid has long been employed by myself in taking impressions in those cases where the contact of the smallest foreign body against the palatine vault creates a feeling of nausea, and notably in difficult plaster cases. This practice renders both hard and soft palate sufficiently insensible to enable me to take an impression at my ease. Further, several patients have told me, on the day following the operation, that the sense of taste has been completely lost for several hours after their arrival at home.

I remember reading in medical journals of cases where this method of producing anæsthesia has been employed in certain surgical operations. We are all aware of the fact that the application of a carbolised solution to the gums will permit us to cut through the mucous membrane without pain to our patient. Starting with these facts I carefully prepared a solution of 2 grammes of crystallised carbolic acid in 100 grammes of distilled water. That is to say, about the maximum quantity soluble in water. This solution, though strong, possesses no caustic properties. Fifty centigrammes of this solution were injected into the gums of two different patients, and in both cases sufficient anæsthesia was produced to allow me in the one case to incise, and in the other deeply scarify the gums, without their knowledge.

I then performed various experiments on my own person, and was convinced that the amount of anæsthesia produced by the above method was equivalent in degree to that obtained by the application of pledgets saturated in the cocaine solution. From this moment it seemed to me that the injection of the simple carbolised solution would suffice, in the generality of cases, for the extraction of teeth (this view has since been completely borne out, as will be shown later on).

These experiments are fully confirmed by the following well-known facts: on the one hand, in lengthy operations, conducted after Lister's method (the continuous carbolised spray at 40°) where the hands of the operator and those of his assistants become remarkably insensitive, and on the other hand certain neuralgic and rheumatic pains cured by injections of morphia, or in some cases, as efficaciously dispelled by the simple injection of distilled water.

In seeking an interpretation of this phenomenon, I came to the

conclusion that the anæsthesia was caused by the distension of the tissues by the injected solutions, whatever these solutions might be, and with all due allowance for any special therapeutic properties they might possess, the action being explainable either by the stretching, the compression, or the momentary anæmia of the nerve filaments of the tissue.

The above is a brief outline of the various facts which served as a basis for my method of producing anæsthesia.

I will now proceed to describe my *modus operandi*.

(I.) Anæsthesia produced by the injection beneath the mucous membrane of a mixed solution of cocaine and carbolic acid.

(II.) Anæsthesia produced by the injection beneath the mucous membrane of a carbolic acid solution only.

SECTION I. *Local Anæsthesia produced by the injection beneath the mucous membrane of a mixed solution of cocaine and carbolic acid.*

Before attempting any description of this proceeding, allow me to relate an experiment I made, in order to discover the properties possessed by a solution of pure cocaine (alkaloid) in crystallised carbolic acid.

By adding 1 part of carbolic acid to 2 parts of cocaine, and gently warming, a mixture of a syrupy constituency was obtained, remaining liquid, and retaining the pinkish colour of pure carbolic acid, and the weakened odour of that acid. Its taste, on the contrary, is notably modified. The carbolic acid has lost its caustic property, and its peculiar taste. On applying this mixture to the tongue or gums, a burning sensation is experienced, the taste of the carbolic acid can still be distinguished, but is weakened and permeated by the bitterness of the cocaine. After a few seconds the taste and odour of the carbolic acid, as well as the burning sensation experienced at the moment of application, have completely disappeared and there only remains the bitterness due to the cocaine, with complete insensibility of the part to pain.

Is the solution thus obtained a phenate of cocaine or a simple mixture? The answer may be supplied by men more competent to judge than myself. Whatever it may be, the product fully realized my expectations.

The following is a short description of the necessary materials. I have always at hand—1st. A filtered solution:—

Crystallised carbolic acid 2 grammes.

Distilled water 100 „

2nd. Several five centigrammes packets of the chloro-hydrate of cocaine.

A Pravaz syringe, of a capacity of one gramme of water, slightly modified by the addition of a shoulder to the side facing the nozzle, giving my first and second fingers a greater purchase, while the piston is being compressed by the thumb.

I have also had several needle-pointed nozzles of various curvatures made, having found them absolutely necessary for wisdom teeth or in severe cases of closure of the jaws. At the moment of using, the five centigrammes of cocaine are dissolved in the fifty centigrammes of the carbolised solution, and slowly injected one half on the labial, the other half on the lingual or palatal aspect, at a spot situated half-way between the neck of the tooth and the presumed end of the root, *i.e.*, at two or three millimeters from the apex of the fang.

A finger of the left hand should be carefully maintained over the puncture, while the syringe is still in situ, to prevent the fluid from escaping, and the surrounding parts should be protected by pledgets of cotton wool, so as to receive any leakage, and thus prevent any of the anæsthetic liquid from penetrating the air passages or digestive tract. Having made the two punctures, the patient is given fresh water to rinse his mouth, and five minutes are allowed to elapse before beginning the operation. In three minutes time the soft parts will be found insensible to a very deep puncture. Between the fifth and sixth minute is the time to operate.

This method of procedure has always given a completely satisfactory result in so far as it concerns the insensibility of the part. As for constitutional troubles I have never yet met with any. Neither sex nor age appear to influence the anæsthesia produced.

I have operated on thirty males and 56 females. As for age I can arrange my patients in the following manner:—

25 subjects ranged from 7 to 15 years old.

28	„	„	15	„	30	„
26	„	„	30	„	50	„
7	„	„	50	„	70	„

—
Total 86

It would seem probable from the constitutional disturbances provoked by the absorption of cocaine, that the temperament of the patient would be of considerable importance. But with the exception of nervous and anæmic patients, *i.e.*, those who are

excitable and resist the operation, no case has yet been presented to my notice justifying this opinion. The after troubles observed with this class of patients seems to me to be attributable rather to emotion than to any action of the drug.

This is proved by referring to the list of cases, where many subjects were operated on twice during the same sitting, without being constitutionally affected. (Cases 9, 26, 27, 53, 59.) Nevertheless these patients absorbed ten centigrammes of cocaine dissolved in one gramme of carbolised water in the short space of a few minutes. Other patients have submitted, after an interval of a few days, to two or three operations, which were always successful. (Cases 1, 2, 4, 6, 8, 11, 19, 21, 26, 33, 37, 49, 55, 60, 66, 71, 74, 81, 85, 86.)

It is also worthy of remark, that those patients who were operated on for the second or third time had lost all fear; in thus fearlessly submitting to the operation, they facilitate the injection of the anæsthetic, which requires great precision.

Cases 28, 42, and 70 showed that one-half the ordinary dose, *i.e.*, about 205 centigrammes of cocaine in 25 centigrammes of the carbolised solution, is sufficient to produce complete anæsthesia.

In conclusion allow me to state that eventually I hope to diminish the amount both of the cocaine and of the liquid at present injected beneath the gum, while still obtaining sufficient local insensibility for the extraction of the teeth.

SECTION II.—*Local Anæsthesia produced by the Injection beneath the Mucuous Membrane of a simple Carbolised Solution.*

Satisfied with the results of my first method, I now turned to my original idea of producing anæsthesia, by injecting a simple carbolised fluid. With this end in view, five subjects, suffering from hopeless caries, were promiscuously taken on the 17th October, 1886, from the clinic of the Dental School at Paris.

Each of these patients had fifty centigrammes of the carbolised solution (two per cent.) injected, in the manner previously described, *i.e.*, one half on the labial, the other half on the lingual, or palatal aspect. Two of the cases were perfectly anæsthetised, and the remaining three experienced almost a complete immunity from pain.

These cases, though few in number, are still sufficient to confirm my previous expectation, that carbolic acid possesses an anæsthetic property almost equal to that of cocaine, and permits us to hope, that the amount of this substance may be still further reduced in

quantity, thus rendering more remote any danger of constitutional troubles, while complete local anæsthesia will still be produced.

CASE I.—Clinic Book, No. 319 (series, October, 1886). Mdle. Scheart, aged eighteen, first lower molar right, alveolar abscess.

Injection of carbolised solution by above method, extraction five minutes after, no pain.

CASE II.—No. 31 (series, October, 1886). M. Ledoux, aged twenty-one, lower central incisor, nerve dead, alveolar abscess. On account of the age of the patient, and the crowding of the lower teeth, extraction was deemed advisable.

The patient was pusillanimous, and extremely frightened. In spite of this, we managed to persuade him of the advantages of the operation, and eventually gained his consent.

The simple injection of the carbolised solution, by above method. Five minutes after the tooth was extracted by a suitable pair of forceps. Its removal necessitated great force. The patient experienced no pain, simply feeling the contact of the forceps, and the traction exercised. Not the slightest after trouble.

CASE III.—No. 332 (series, October, 1886). Mdle. Batten-dier, aged eighteen, extraction of the two roots of lower first molar right, attacked by periostitis.

Simple carbolised fluid injected, extraction of the anterior root five minutes after. No pain. At the same sitting extraction of posterior root, slightly sensible. The patient made no movement, and the facial expression was unchanged. No after uneasiness.

CASE IV.—No. 325 (series, October, 1886). Mdme. Char-rioux, aged thirty-six, second upper molar left, periostitis.

Simple carbolised fluid injected, extraction five minutes later; the patient made no sound, and declared she suffered much less than on any previous occasion. No after uneasiness.

CASE V.—No. 327 (series, October, 1886). M. Val, aged thirty-two, lower wisdom right, incompletely erupted; patient experiences great pain, and could not sleep the previous night; has only taken a bowl of milk since the preceding day.

Simple carbolised fluid injected, extraction six minutes after, which proved very difficult, from the length and huge size of the fang. The patient states that he was operated on last year, and suffered atrociously; he also fainted. This time he had a fainting fit of short duration. The pain was insignificant.

(To be continued.)

REPORTS OF SOCIETIES AND OTHER MEETINGS.

The Odontological Society of Great Britain.

THE Annual General Meeting of this Society was held at its rooms, 40, Leicester Square, on Monday, the 10th ult., Mr. T. CHARTERS WHITE, President, in the chair.

The Treasurer, Librarian, and Curator, presented their annual reports, which were all highly satisfactory. The Treasurer's balance-sheet showed receipts amounting to £528, and an expenditure of £508, including about £100, the cost of the conversazione given by the Society during the meeting of the British Dental Association in London in August last. The surplus for the year amounted therefore to £20 only, but the Society possesses an invested capital of over £2,500.

The Librarian, Mr. WEISS, reported that greater interest was taken in the library by the members, as shown by the increase in the number of books borrowed. The 6th vol. of "Todd's Anatomy" was missing, and he requested its return.

The Curator, Mr. STORER BENNETT, stated that during the year forty-one specimens had been added to the Museum. Certain alterations in the arrangement of the Comparative Anatomy specimens had been commenced, by which it was hoped the collection would be rendered more easy of examination, and therefore of greater value for purposes of study. A series of preparations was also in course of formation, which when completed would afford valuable information concerning the sockets and roots of teeth in various animals, and had already led to the discovery of some interesting features in the preparations examined, to which he hoped to allude on a subsequent occasion.

Many skulls illustrating the dentition of the lower animals were still absent from the collection, and would be extremely welcome additions; among others he might mention were those of the lion, wolf, bull-dog, King Charles spaniel, toy terrier, greyhound, polecat, weasel, racoon, ant-eater, sloth, beaver; common, horseshoe, and vampire bats, and duck-billed platybus.

Dr. WALKER showed a series of specimens illustrating the various stages of Mr. Cunningham's process of coating vulcanite with gold, which he considered a great stride of advance in vulcanite-work. He had fitted four patients with dentures coated in this way. In all of them the result had been quite satisfactory, though

the simple vulcanite plates worn previously had given rise to great soreness and congestion of the mucous membrane. Dr. Walker found that the deposit of gold by means of the battery was facilitated by rubbing the surface of the denture over with plumbago. He had also tried the plan of coating the plate with a thin film of silver or copper by means of the battery, and then getting a deposit of gold on this by the same means. The dentures had stood the test of a month's wear extremely well.

A discussion ensued in which Messrs. Moore, Stocken, Vanderpant, Redman, Henri Weiss, and the President took part.

Dr. ST. GEORGE ELLIOTT invited the members to attend a clinic, to be given at his house on February 7th, the day of the next meeting of the Society, between the hours of 2 and 5 p.m. He hoped to have two chairs occupied, and something worth seeing shown in each of them. The Society had done a great deal of excellent scientific work, but he doubted whether the practical work of the profession had always received from it its due share of attention. Proposals for the holding of clinics had been made by members of the Society, but the Council, no doubt for good and sufficient reason, had not favoured them. He suggested, therefore, that the matter should be taken up by the members individually, and if his experiment proved a success it might, perhaps, be followed by others.

Mr. HUTCHINSON mentioned a plan which he had adopted in order to hide an incurable irregularity. A lady, aged twenty-five, consulted him with regard to an upper lateral which was much misplaced. Several attempts had been made to get it into line with the other teeth, but unsuccessfully, owing to the faulty direction of the root. Mr. Hutchinson fitted a gold collar round the tooth, securing it with osteo cement, and soldered an artificial lateral to this, adjusted so as to occupy its proper position. Some might be disposed to criticise his work, and predict that the collar would work loose, and that the lateral would decay; but he thought that with care and cleanliness on the part of the patient, and occasional inspection and renewal of the osteo lining, this might be prevented.

Mr. MORTON SMALE gave his experience of the value of cocaine in dental practice. He began to use it in 1884, and since then had never been without it. He found it most useful for extractions, torsions, removal of live pulp, and for rapid separation by wedging, and had not met with any bad effects from it. Although it was

constantly used by a certain number of practitioners, the profession as a whole appeared to be still in a condition of suspended judgment, though he thought it was time all suspense was removed. He proposed, therefore, that a committee should be appointed to investigate the subject and give an authoritative declaration as to the value and uses of the drug. He thought the Society could not render a better service to the profession than by enquiring into and reporting on any discovery and new method of practice which might be introduced.

Dr. WALKER having seconded the proposition,

The PRESIDENT advised that it be left for the consideration of the Council. It would be difficult at so large a meeting as that was to select a satisfactory committee, or to decide upon the exact scope of the enquiry. He felt sure that if it was found that such an enquiry was generally desired by the members, the Council would at once make the necessary arrangements.

Mr. VANDERPANT, of Kingston, showed two geminated bicuspid removed from the mouth of a lady, aged thirty-two, and Mr. REDMAN (Brighton) showed a model of the lower jaw of a lady, aged forty-eight, who had recently erupted two supernumerary bicuspids on one side, and one on the other; she had also two supernumerary teeth behind the wisdom teeth.

Mr. WILLOUGHBY WEISS read a letter from Mr. Alfred Coleman, in which the writer complained of having been misquoted by Dr. Buxton in the course of the paper on the Physiological Action of Nitrous Oxide, which he read before the Society last March. After some discussion it was decided that a copy of the letter should be sent to Dr. Buxton, who would have an opportunity of replying to it when he read his second paper on the same subject, which, according to present arrangements, would be brought forward at the next meeting but one.

The PRESIDENT then called upon the Scrutineers of the ballot for their report, and they stated that the list of office-bearers recommended by the Council had been unanimously accepted. The list was as follows:—

PRESIDENT.—Charles S. Tomes, F.R.S.

VICE-PRESIDENTS. — (*Resident*) Messrs. Henry Sewill, S. J. Hutchinson, and J. H. Mummery; (*Non-resident*) Messrs. Andrew Wilson (Edinburgh), Richard Rogers (Cheltenham), and G. C. McAdam (Hereford).

TREASURER.—James Parkinson, Esq.

LIBRARIAN.—Felix Weiss, Esq.

CURATOR.—Storer Bennett, Esq.

EDITOR OF THE TRANSACTIONS.—Frederick Canton, Esq.

HONORARY SECRETARIES.—Messrs. R. H. Woodhouse (*Council*), Willoughby Weiss (*Society*), and C. J. Boyd Wallis (*Foreign Correspondence*).

COUNCILLORS.—(*Resident*) Messrs. Morton A. Smale, Arthur S. Underwood, E. G. Betts, J. F. Corbett, Thomas Arnold Rogers, Sir Edwin Saunders, John Fairbank, David Hepburn, and Ashley W. Barrett. (*Non-resident*) Messrs. J. R. Brownlie (Glasgow), J. H. Whatford (Eastbourne), F. H. Balkwill (Plymouth), George Brunton (Leeds), E. Apperley (Stroud), and J. H. Redman (Brighton).

The PRESIDENT then proceeded to deliver his valedictory address.

The close of another year of the Society's existence had brought with it the surrender of the honour which had been conferred upon him at its opening. It was scarcely necessary for him to speak of the gratification which this honour had afforded him ; it would be a pleasant remembrance to the end of his days, and he thanked the Society for it.

Although the year just past had not been marked by any startling novelties in dental surgery, yet there were encouraging signs that the study of dental diseases and their treatment was being pursued with a careful attention which must ultimately lead to the further alleviation of the peculiar sufferings for which the aid of the profession was sought.

A valuable paper on "the Physiological Action of Nitrous Oxide," which every dental practitioner would do well to study, had been contributed by Dr. Dudley Buxton. The advantages of careful observation and practice in the administration of this beneficent agent were great, but a knowledge of the physiological effects which he is inducing in his patient must give the administrator greater confidence and ease. He had hoped that Dr. Buxton would have been able to lay before the Society the conclusion of his instructive paper, but that was still a pleasure deferred.

Mr. Bland Sutton, to whom the Society had often been indebted for valuable papers, had furnished one of great interest, on "Dental and Oral Cases in Animals," which was, as might have been expected, full of information. Such papers as Mr.

Sutton's, although not coming absolutely within the scope of daily practice, were nevertheless valuable adjuncts to general professional knowledge. In this age of great mental activity, the educated public was very omnivorous in its reading, and dental practitioners ought to be prepared to give an answer to the questions on subjects collateral to the profession which intelligent patients would often put to them. He hoped, therefore, that Mr. Sutton would on many future occasions favour the Society with further communications on Comparative Dental Pathology.

Histology, also, though not a branch of study absolutely required by the dental practitioner, was one which he could scarcely do without. In the course of his practice he would meet with many occasions when he would desire to investigate abnormalities in the teeth or in other parts of the oral cavity, and to be able to recognise their histological characters was frequently of great assistance in diagnosis. To demonstrate the histological elements of even a simple membrane was not easy without a knowledge of the effects of various reagents and staining fluids. The latter, in particular, had added new power to histological research, bringing out hidden elements of a tissue which would otherwise be overlooked, and it was to direct attention to this valuable aid in histological pursuits that Mr. Groves' paper was specially directed with a clearness resulting from close familiarity with this subject.

Mr. Storer Bennett in a short paper had called attention to the recent additions to the museum, which he lost no opportunity of enriching, and lastly, he had himself contributed one commenting on a number of fragments of human maxillæ, possessing great interest as relics of the "stone age," which by the courtesy of his friend, Mr. William Cunnington, he was enabled to present to the notice of the Society.

Although the papers contributed to the Society during the past year had not been quite as numerous as was usually the case, there had been no dearth of interesting and instructive casual communications to make good the deficiency. Really good papers, fit to be presented to a Society such as theirs, could not always be produced to order; they should be the outcome of years of study and observation. Moreover, a paper on some subject to which the author had been giving his undivided attention for years, however valuable and instructive it might be, was seldom capable of being discussed, since it must almost necessarily sur-

mount the attainments of the audience in that particular direction. Casual communications, on the other hand, were always welcome ; they appealed to the experience of all, and oftentimes contained the germs of some practical application, which being fertilized by discussion, was made available for the benefit of all. He was far from wishing to speak disparagingly of papers, especially of such as were not written merely to stop a gap, but were the result of intellectual energy devoted to the working out of some of the many subjects cognate to dentistry, which offered an attractive field for investigation. These were always valuable, but could not be common.

One event of the past year could not be omitted from his brief summary, viz., the meeting of the British Dental Association in London. It was gratifying to know that the Society's conversation was thoroughly enjoyed by all who attended it ; it had afforded the London members great pleasure to hold out the hand of welcome to their provincial brethren, and to make the personal acquaintance of many whose names and work they had previously known only by the good reputation which had preceded them.

Our beloved Sovereign, who throughout her happy and prosperous reign had always encouraged and recognized worth under whatever guise it had been presented to her notice, had during the year added another honour to the profession in dignifying one whom all its members looked up to and revered as their leader ; one whose literary and scientific achievements had been appreciated by all for their originality and thoroughness ; from whose first work might be dated the elevation of the dental profession as a special branch of surgery. He had no need to say that he alluded to Sir John Tomes. Long might he be spared to guide the profession with his counsel and encourage it with his approbation.

In conclusion, before bringing his year of office to its close, he would take the opportunity of thanking the officers of the society for all they had done to lighten his labour and smooth his path. He felt assured that whilst the Society had such men to serve it, it would never fall from the high and influential position to which it had attained.

At the conclusion of the address Mr. GEORGE GREGSON proposed a cordial vote of thanks to the President. He had seen many Presidents in that chair, and he felt sure that Mr. Charters

White would be associated with those who were specially remembered for the efficient manner in which they had discharged their duties and furthered the interests of the Society.

The resolution having been seconded by Mr. MORTON SMALE, the members signified their appreciation of Mr. White's services with hearty applause.

Mr. STOCKEN then moved that the thanks of the Society be given to its officers. The Society was fortunate in having so many members who were willing to devote a large amount of time to its welfare.

Mr. H. CAMPION (Manchester) seconded this on behalf of the country members. Many of these were unable to attend the meetings of the Society as often as they could wish, but they took a pride and an interest in it notwithstanding, and were duly grateful to those who took an active part in its management.

Mr. WEISS (the Librarian) replied, thanking the members for the consideration always shown for the officers of the Society, for which they were all of them very grateful.

The PRESIDENT also thanked the members briefly for the kind way in which they had acknowledged his services. His office had given him great pleasure, and he trusted that, relieved of his responsibilities, he might long continue a regular attendant at the Society's meetings.

The meeting then terminated.

The usual Monthly Meeting of this Society was held at 40, Leicester Square, on Monday the 7th inst., Mr. C. S. TOMES, F.R.S., the newly-elected President, in the chair.

The Curator (Mr. Storer Bennett), showed some valuable additions to the Society's Comparative Anatomy series lately acquired by purchase and donation.

The PRESIDENT read a letter from Mr. James Parkinson resigning the office of Treasurer, which he had held for thirteen years. Mr. Tomes remarked that much as they regretted the loss of Mr. Parkinson's services, they felt that in his present state of health it would not be right to burden him with unnecessary cares and responsibilities. They could only accept the resignation, and tender him their thanks for the care he had taken of the Society's property during his term of office. It was the duty of the Council to fill up the vacancy thus caused, and he was pleased to be able to announce that Mr. Thos. Arnold Rogers had been prevailed upon to undertake the duties of Treasurer.

Mr. WEISS proposed that the best thanks of the Society be given to the late Treasurer for his invaluable services. Although Mr. Parkinson had frequently had very disagreeable duties to perform, he had always performed them with the utmost courtesy and without creating the slightest feeling of personal animosity. He trusted that Mr. Parkinson's health would improve, and that he might soon be able to resume his attendance at the Society's meetings.

Mr. CHARTERS WHITE seconded the resolution, which was at once carried by acclamation.

Mr. BETTS showed models of the mouth of a boy, aged nine, who had as yet erupted no permanent teeth, nor had any of the temporary set been shed. Several other members of the family had retained some of the temporary molars, and the mother had only quite recently lost a temporary incisor. He also mentioned the case of a lady aged thirty-five, who had lately erupted a dead tooth. She had for some time worn a small gold plate carrying an upper first bicuspid and came to him complaining that this plate did not fit, and that there was a lump under it. She had also been suffering from very severe neuralgia. Mr. Betts found the point of the right upper canine just visible through the gum, and that the tooth was already carious to such an extent as to expose the pulp. He devitalized the tooth with arsenic and then filled it, the process of eruption going on just the same. This showed how little the tooth itself had to do with its own eruption, the force which effected this being evidently altogether external.

Mr. STORER BENNETT read notes of a case of deep-seated abscess in the neck, due to an impacted wisdom tooth, in which the usual signs of alveolar abscess were absent; nor did the removal of the lower second molar, which was very tender on pressure and badly decayed, nor that of the third molar, which was lying horizontally with the crown looking forwards, afford the patient any relief; though on opening the abscess in the neck a probe could be passed up almost to the gum, and there was a history of "swelled face" in the early stage of the trouble.

Mr. WALTER COFFIN showed a modification of the aspirator, designed by M. Rosenthal, of Liège, for the treatment of alveolar abscess. By it the pus could be evacuated and an antiseptic solution injected and again withdrawn, the operation being repeated until the sac had been thoroughly washed out.

Mr. CANTON showed a tooth obtained from an Indian grave,

and forwarded to Sir John Tomes from Ontario, Canada, by Mr. Charles James Fox, a former member of the Society, as a specimen of erosion. It had been held by some that erosion was due to the use of the tooth brush, but as the North American Indians were not in the habit of cleaning their teeth, the hypothesis did not hold good as regards them, and could not therefore be considered a satisfactory explanation.

Mr. MUMMERY thought the disease had the appearance of superficial caries rather than erosion, an opinion which other members seemed to acquiesce in.

Mr. C. D. DAVIS showed a model of the upper jaw of a lady, aged twenty-one, whose temporary laterals and canines were still retained. The right permanent canine had erupted, but there were no signs of the left canine or of the permanent laterals. He also exhibited models of the mouth of a girl, aged thirteen, in whom two lower incisors and the second bicuspid were absent, whilst in the upper jaw the left temporary lateral and both canines were standing. No permanent teeth had been extracted.

Mr. WILLOUGHBY WEISS exhibited a model of the upper jaw of a youth, aged twenty, showing the temporary canines still standing, whilst the permanent canines occupied the place of the permanent laterals, which were absent.

Mr. LEONARD MATHESON gave a favourable report of his experience of the working of Tauber's Hydraulic Press, exhibited at the November meeting of the Society. In simple cases the amount of time saved by its use was considerable, and it ensured a very perfect fit.

Mr. ROBBINS gave the particulars of a case of pyorrhoea alveolaris, treated with very satisfactory results by the method recommended by Mr. Whatford, of Eastbourne, in the August number of this Journal. Although one case was not sufficient to found an opinion on, he considered the method well worthy of trial.

A discussion ensued, in which Messrs. Ashley Gibbings, F. J. Bennett, and Dr. Field took part, and which was stopped by a suggestion from the President that the subject should be brought forward with due notice at some future meeting.

The PRESIDENT then proceeded to deliver his Inaugural Address, of which the following is an outline :

Mr. Tomes began by referring to the difficulties of the task which custom imposed upon each successive occupant of the

presidential chair, of finding within the sharply defined limits of the dental specialty, matter for an address which had not already been turned to account by his predecessors. A review of recent advances in professional knowledge and practice was a favourite subject on such occasions, but although there was progress to report, it was not of such a character as to warrant him in availing himself of this time-honoured resource. Indeed, so far from feeling at liberty to indulge in mutual congratulations, he was rather disposed to deplore the small amount of careful scientific investigation at present carried on in the profession. True there was much to be said by way of apology for this short-coming. Year by year, in the modern practice of dentistry, operations became longer, entailing much fatigue and hours spent in constrained positions, struggling with manipulative difficulties. The conduct of but a moderate practice was thus a burden almost too heavy for even a strong man's powers; when work was done there was little energy left to be devoted to any matter of serious study, and it was not hard to understand why original research had fewer devotees than could be wished for. Another factor which operated adversely to research was the comparatively early period at which, owing to the growing demand for skilled dental services and the increased consumption of time in the performance of dental operations, the more promising of those entering the profession secured the full employment of their time, and thus escaped that period of enforced leisure which proved so fruitful of good work amongst young medical men. Members of the dental profession were thus heavily handicapped by their calling, and were liable to fall into a deep rut of daily routine, a machine-like automatic regularity in the performance of their daily duties. But it behoved them to do their utmost to escape from this form of mental deterioration, and the most valuable preventive was to have some hobby outside the limits of their daily work. It was at the same time necessary to approach the work with thoroughly receptive minds, giving it their best powers, and striving to follow up every little clue and to clear up every little obscurity which presented itself. In this way countless interests would arise, which would be a refreshment, and not an added toil.

He had once been told that the subject was played out; that there was nothing left to work out and nothing to write about! But this was far from being the case. On the contrary, there was scarcely anything which they could flatter themselves they under-

stood thoroughly. Take for example the premature loss of the teeth, the disease known as Pyorrhœa Alveolaris ; did we know all about it, or even all that could be comparatively easily found out about it? The only answer that could be given was that nothing was known of the exact pathology of the disease, though it was easily accessible for study, and that it was treated with pure empiricism.

In the pursuit of every branch of study a time arrived when that which lay upon the surface, patent to casual intelligent observation, became worked out, and when for further progress a closer and deeper investigation became essential. And he thought that if that closer investigation with the aid of modern methods of research were applied to the problems of dental pathology, a sufficiently rich harvest of results would reward the effort. In the wider field of medicine and surgery, the immense achievements of the antiseptic method had been the outcome of investigation into the nature of organisms, which, but a few years ago, would have been deemed quite outside the pale of the interests of the practical surgeon. So, too, the nature of certain infective disorders, and the light thereby thrown upon others, the history of which was, as yet, but incompletely known, the localisation of cerebral function, and the brilliant results which, with the aid of antiseptic surgery, had resulted therefrom, had all been arrived at by a closeness of investigation, which had as yet hardly been brought to bear upon dental problems.

Another enticing field for inquiry, though not admitting of so much accuracy, lay in the question how far heredity played a part in the genesis of dental irregularities and of dental caries. There were some irregularities which were obviously the result of accidental circumstances in the individual, but there were also a vast number which *a priori* would seem to be quite as likely to be influenced by heredity as were other personal peculiarities. Old family portraits were of much interest in this connection. He was acquainted with one family in which, with rare exceptions, the mouth was very small and the jaw contracted and V-shaped to such an extent as to be plainly discernable on the outside of the face, and this, which formed a marked feature of the strong family likeness which distinguished all the members, was clearly visible in the family portraits for many generations back.

In the example of transmitted deformity just mentioned, the influence had, of course, been derived from the male line in spite of various inter-marriages into other families, but he had also met with

similar transmission from the mother. The problem was evidently a complex one, but it appeared to him that a close examination of the mouths of children of large families, taken in conjunction with their parents, might not improbably throw light upon vastly wider questions of inheritance. At all events it was ground which was hardly explored, and which gave room for what Prof. Tyndal had happily termed the "scientific use of the imagination."

It was rather the fashion to assume that dental irregularities were things of modern date, the result of disordered innervation and over-pressure. But a careful inspection of old portraits did not tend to support this supposition. Thus an examination of the portraits by Vandyke, now being exhibited at the Grosvenor Gallery, or of those by old masters to be seen at the Royal Academy, would result in the recognition of several very obvious examples of deformities of this class.

Another thing which could not fail to strike every one who looked much at old portraits, was that the type of face which was held to be beautiful at one period, was not that which was specially admired at another. The beauties of King Charles' day were not like those of the Georgian era, and neither would be considered great beauties at the present day. There was a fashion in beauty as in other things. The majority of people were capable of being led in such things, and could be brought to admire that which they were persistently told was beautiful, and popular pictures and the like could thus do much to inculcate a taste for a particular type. Now a look round any picture gallery, into the shop windows, or the pages of illustrated papers, at once afforded evidence of the fact that the type now held up for admiration was a tapering form of face with a small jaw. And it was quite conceivable that this popular idea of beauty for the time being might have an influence in modifying the form of the jaws, at all events in certain classes of society; for every man who, swayed by this prepossession in favour of this type of face, married a girl in whom it was found did something towards its intensification.

That bad teeth run in families was a fact only too familiar, even to the public, and this bad quality of tooth, which rendered it almost certain to be early attacked by caries, was not by any means always associated with a low standard of general health. This might be due either to malnutrition in the individual during the period of active tooth-building, or to inherited tendency. It was a matter of frequent observation that quite trivial peculiari-

ties in the teeth, such as the dwarfing of a lateral incisor, were inherited, just as complexion, colour of hair, and a vast number of other points were accurately transmitted, and thus it seemed probable that quality of teeth might similarly be inherited. On the other hand, there was evidence that the teeth themselves were less susceptible to stunting, starving influences than the bones which support them: thus in cases of rickets, though the maxillæ were stunted the teeth were often of full size. It thus became an interesting question to investigate whether the health of the growing individual or heredity had most to do with determining the quality of the teeth, and as most members of the profession had whole families passing under their notice, the difficulty of obtaining data was not great.

In conclusion, Mr. Tomes thanked the members for the honour they had done him in electing him as their president, and expressed a hope that during his term of office the meetings might be both profitable and interesting; if they failed to be so it would not be from want of endeavour on his part.

Having concluded his address, the President proposed the usual vote of thanks to the donors of specimens and contributors of casual communications during the evening, and announced that at the next meeting (March 7th) Dr. Dudley Buxton would read the concluding portion of his paper on "The Physiological Action of Nitrous Oxide." The meeting then terminated.

Odonto-Chirurgical Society of Scotland.

THE Third Ordinary Meeting of the Society was held on Thursday, January 13th, 1887—the President, Mr. BOWMAN MACLEOD, L.D.S., in the chair.

At the instance of the President, Mr. WILSON made a few remarks upon Dr. Symington's recent paper.* He considered that Dr. Symington's conclusions were quite borne out by the evidence adduced. In edentulous jaws, they had a good example of retrograde action, the absorption of the alveolar borders resulting in making the upper jaw, in most cases, narrower than the under; so much so at times, as to give considerable trouble so to arrange the molars in the artificial denture, as to obtain a stable masticating surface.

Some of the sections exhibited in a very marked degree the changing relations of the second permanent molars to the first, and of the third to the second, during their development.

In the absence of Mr. Nicol, the President called upon the

* "Journal British Dental Association," January, 1887, p. 23.

SECRETARY to read the paper for the evening's consideration, entitled :—

A FEW NOTES ON ALVEOLAR HÆMORRHAGE.

By JAMES M. NICOL, L.D.S.Ed.

After some introductory remarks, the paper discussed the question under three headings, viz. :—Varieties, Causes, and Treatment.

I.—VARIETIES.

Our works on Surgery divide hæmorrhage into three kinds : arterial, venous, and capillary, and in addition to this well-marked classification, various attempts have been made to classify according to the causes, and such terms as traumatic, spontaneous, active, passive, critical, periodical, have been used. These, however interesting they may be, so far as other hæmorrhages are concerned, do not enter into our calculations so far as the alveolar varieties may require our treatment.

For all practical purposes alveolar hæmorrhages may be said to be included under the heads of Traumatic, Vicarious, and Constitutional.

(a) *Traumatic*.—In a sense all alveolar hæmorrhages are traumatic, but it will perhaps be better to confine this term to the ordinary primary hæmorrhage following the extraction of one or more teeth. It is, as a rule, easy of control, and generally ceases of itself in a very short time. At the same time it may, from various causes, last so long that it becomes necessary to take means to stop it. If there be much inflammation of the surrounding tissues, primary hæmorrhage is likely to be very profuse and of some duration, owing to the vessels not contracting so readily as when in a healthy condition, or the profuse primary hæmorrhage may occur as the result of accident, such as a portion of the tuberosity of the upper jaw coming away in extraction of the wisdom tooth : or a lower wisdom tooth may have its roots embracing the inferior dental artery, and may cause its rupture in extraction. These, are, however, rare occurrences, and, speaking generally, the ordinary hæmorrhage following tooth extraction is not profuse or long-continued.

(b) *Vicarious Hæmorrhage*.—Probably the most frequent explanation of exceptionally profuse hæmorrhage is that it is vicarious of some other blood-flow. The most common illustration of this is that of a woman having a tooth extracted at the menstrual period, when very frequently an alarming hæmorrhage will take place, and the menstrual flow be correspondingly diminished, or absent altogether. Alveolar hæmorrhage may also be vicarious of epistaxis in full-blooded people, who are subject to periodic attacks of bleeding at the nose. A little judicious enquiry will generally enable the operator to make up his mind upon a case of profuse primary hæmorrhage.

(c) *Constitutional*.—The hæmorrhages to which this term may be applied, undoubtedly provide some of the gravest cases with which we have to deal. Fortunately they are so rare that many dentists pass through a long professional career without meeting with one. Certain constitutional conditions seem to predispose to hæmorrhage ; an anæmic condition, for instance, this being probably due to weakness of the contractile power in the vessels. Anything which tends to lower the system, as bad diet, or any chronic disease, is apt to pro-

duce a state of constitution favourable to hæmorrhage. In addition to all these, we have that special condition to which the name Hæmorrhagic Diathesis is applied, which is practically a confession of our complete ignorance as to its causes and treatment. What we do know about this state is : that it is often hereditary, that it is more frequent in males than females, but seems to be more often transmitted through the mother than the father, and that it is a congenital condition, usually manifesting itself first in early infancy ; but as to its pathology the authorities differ completely. The symptoms include a marked tendency to hæmorrhage from very slight causes, or apparently from none at all, and in many cases swelling of the joints, especially the knee joint. That which makes a patient suffering from this condition such a serious responsibility, is the fact that the primary hæmorrhage is often not at all profuse and shortly ceases. Then some time after, secondary hæmorrhage will commence, which may either be profuse from the socket of the alveolus, or may consist of a capillary oozing from the edges of the gum round the wound, this latter form being the most troublesome to stop. The case is often further complicated by the fact, that either through ignorance or carelessness, the dentist is not informed of the state of matters before the operation, or even immediately after it ; and he may have extracted not one, but several teeth, thus increasing the gravity of the case a hundred-fold.

II.—CAUSES OF HÆMORRHAGE

These have practically been dealt with under the previous head ; and need not be further discussed here, except that I would like to draw attention to a possible cause which I have not seen noticed hitherto, and that is alcoholic excess. My attention was drawn to this as a possible cause during the early part of last year. I had occasion to see a patient, a man of good position, who had ruined his constitution with drink ; had passed through one attack of delirium tremens, and was then under treatment for the prostration following upon that attack. The first lower molar on the left side was very loose, and causing him a good deal of irritation, so it was extracted, and as the bleeding did not seem anything more than usual, no extra precaution was taken. The hæmorrhage, however, did not cease, but continued in the form of a slow dribble all that day and night ; the patient then became alarmed, and it was necessary to pay three visits in one day, and plug the alveolus firmly with lint soaked in Dr. Richardson's Styptic Colloid, each time, before the bleeding was finally checked. After a day's intermission it broke out again, but less profusely, and after plugging again in the same manner it finally ceased. One thing struck me very much in connection with this case, and that was the appearance of the gums, tongue, and surrounding tissues—they looked and felt perfectly disorganized and rotten, and I could quite believe that a scratch of the gums or tongue might easily set up another attack of bleeding. This coincides with the well-known fact that habitual drinkers make very bad subjects for accidents or surgical operations, their wounds as a rule not healing well. Of course it is impossible to build up any theory upon one case only, but I mention it in case any one else may have noticed a similar one.

III.—TREATMENT.

Passing now to the all-important question of treatment, upon which the welfare, and perhaps the life of a patient may depend. In the case of simple profuse primary hæmorrhage, the treatment does not generally need to be of a very vigorous order. The application of a plug of lint saturated with Dr. Richardson's Styptic Colloid I have generally found sufficient, accompanied by rest in the recumbent position, with the head slightly raised. Where the hæmorrhage is vicarious, it will generally be very profuse, but not of long duration; and the same simple measures will, as a rule, suffice to put an end to it. With regard to the more serious secondary hæmorrhage, the socket should be first syringed well out with warm water, then small strips of lint soaked in some styptic packed firmly down into it with a small ball-headed plugger; the lint is better used in small pieces, as you are thereby enabled to take the plug out piece-meal after the bleeding has been checked; whereas if you use one large strip of lint, the operation of loosening such a large plug is very liable to start hæmorrhage again. This plug of lint should be built up so as to project above the gum, and then some form of compress must be used to press it firmly and evenly. A very simple and very efficacious one can be made by taking a piece of gutta percha tube, about three-quarters of an inch in diameter, such as is used for call-pipes, have the piece long enough to extend over one or two teeth in front and behind, slit it up one side and bend the edges apart, when it will be found to form a clumsy clamp, with a fair amount of spring in it; by means of a hot knife it can be pared to suit the shape of the jaw, and also gutta percha can be built up on the top of it so as to meet any teeth in the opposite jaw. Let this clamp be lined with lint soaked in styptic colloid, and the edges of the gum round the plug carefully painted with a thick coating of the same styptic, then the clamp placed in position, and the patient directed to close the mouth until the teeth are about half-an-inch apart; this will allow of swallowing with a certain amount of ease, and will check any sucking of the parts, which is always to be prevented, as it only places matters where they were. As soon as the gutta percha into which the opposing teeth bite, has cooled sufficiently, the jaws should be carefully bound up and kept so for some days. Messrs. Ash & Sons' "chin appliance" for retracting the lower jaw will be found very useful for this purpose, and is rather more sightly than an ordinary bandage. When all hæmorrhage has ceased for some days, the compress may be removed, but it is generally wiser to leave the plug for a few days afterwards, as it generally loosens slightly in that time, and can be taken out with less risk of starting the hæmorrhage once more. Should there be very few teeth left in the mouth, or none at all, I should think the best plan would be to take models, and strike upper and lower plates, to which very strong spiral springs might be attached, and the plates lined in the manner indicated above. If the patient is only kind enough to let the dentist know beforehand the danger he is running, I believe that in the great majority of cases secondary hæmorrhage can be prevented altogether by plugging the socket immediately after the operation with strips of lint soaked in the styptic colloid. It seems as if very little would check the secondary hæmorrhage at the moment of commencing, but once it gets fairly started it is much more difficult to stop. I have found several patients who announced themselves as

"bleeders" give very little trouble when treated in this way. I should certainly under no circumstances extract more than one tooth at a time for a "bleeder." The multiplication of wounds only increases the difficulty of stopping the hæmorrhage. With regard to styptics; as you will have gathered, I pin my faith to Dr. Richardson's Styptic Colloid. It has many advantages over perchloride of iron; the latter making a nasty mess of the mouth, and even causing inflammation. Properly applied, in combination with firm pressure, I have never known the styptic colloid to fail. With regard to other local measures, the actual cautery has been tried in several cases, but with scant and only temporary success; and there is always the risk of wounding the cheek or lip in applying it. Matico leaf, tannic acid, gallic acid, and turpentine have also been tried, sometimes with success, sometimes not. In one or two cases on record, everything that could be suggested has been tried without success, and the termination has been the death of the patient. Of such a case, my old master, the late Dr. Roberts, of Edinburgh, gave an account in his paper read before this Society some years ago, and the results of that case are to be seen in the Society's museum, in the shape of an ingenious compress which he invented for checking alveolar hæmorrhage. I well remember that the gist of his teaching to his pupils in this subject was styptics and pressure, and I am bound to say I have found his teaching correct. I have said nothing on the subject of constitutional treatment, as I consider that belongs to the medical man's department, and such a serious thing as a bad case of secondary hæmorrhage should always be treated in conjunction with the physician or surgeon. But I cannot leave the subject without referring briefly to the important point opened up by the case communicated to the Odontological Society by Mr. J. S. Turner, at one of the recent meetings, in which the patient had been prepared for the extraction by being put on a course of tincture of ergot and sulphuric acid for a week previous to the operation. It was an undoubted case of hæmorrhagic diathesis, as the patient had upon several previous occasions bled almost to death as the result of tooth extraction; on this occasion, however, although secondary hæmorrhage set in about twenty-four hours after the operation, it was of a very slight and unimportant character, and soon passed off. In this case Mr. Turner had the advantage of knowing beforehand the condition of his patient, and under similar circumstances I should certainly see the patients' medical attendant, and consult with him as to the advisability of some similar course of preventive treatment; but as it often happens that the dentist knows nothing about the danger until the operation is over, it is imperative that he should have all his apparatus ready, and at hand, for stopping hæmorrhage.

It will be found an excellent plan to fit up a small box or bag with all the most useful requisites for arresting hæmorrhage, so that if called out at night, as has happened to the writer, you have nothing to do but to lift your bag or box, and go.

One case of hæmorrhage, if it be a serious one, will be quite as much as any dental surgeon will ever wish to encounter; and after meeting with it, he will be much more likely to over-estimate the risks of prolonged bleeding than to under-estimate them.

In conclusion, I can only enforce, as the result of what little experience I have had, the great desirability of plugging the cavity at once after the extraction, before the patient has left the house; if there

is any suspicion of liability to hæmorrhage. As I have pointed out, this will often prevent secondary hæmorrhage altogether, and it is the secondary hæmorrhage which is to be so much dreaded ; besides, it also prevents the injudicious attempts which the patient and friends make to stop the bleeding before calling in help ; which often consist of putting the patient in front of a roaring fire, wrapped up in blankets, and administering hot drinks and mouth washes ; this aggravating the very state of things which they want to stop ; and, of course, the longer a case of hæmorrhage is allowed to go on before it is treated, the less likely is treatment to be successful.

DISCUSSION :—

Mr. WILSON said, that in all ordinary cases (that is, where the blood was forming a clot) he found the mere plugging the alveolus with cotton wool soaked in Richardson's Styptic, and then placing over the plug and alveolar margins a saddle of cork, thick enough to bring direct pressure to bear on both by the closure of the jaws, quite sufficient. The saddle was made to fit in as tightly as possible between the teeth on each side, so that none of the pressure was lost, which would be the case if the saddle, whether made of cork, gutta-percha, or other material, was so broad as to include these teeth.

He was thankful to say that of these cases, in which there was a want of coagulability, he had only met with one, the bleeding being set up by the patient (a boy) picking out a small morsel of a temporary root. Suspecting the patient of aggravating it by sucking, he covered a considerable surface with a gutta-percha-lined plate, and the case yielded to constitutional treatment. He decidedly objected to the use of perchloride of iron, or burnt alum, as styptics in the mouth.

Mr. MACGREGOR mentioned one or two cases which had occurred in his practice. About fourteen years ago, the late Dr. Angus Macdonald called him up about one o'clock one morning, to see a patient of his who was suffering from a severe attack of hæmorrhage from the sockets of a lower molar and bicuspid tooth, which had been extracted on the preceding day. The Dr. had, for four hours, been unsuccessfully endeavouring to arrest the flow of blood, using perchloride of iron as a styptic. Mr. M. removed the clots of blood, and syringed the part thoroughly, and applied Richardson's Styptic Colloid. The first application was unsuccessful, but after applying it a second time, and using considerable force in packing the cotton steeped in the styptic down into the sockets, the hæmorrhage ceased. He waited for about an hour to assure himself that no recurrence was likely, and then left. The case was rather a serious one, as the patient was very weak and anæmic from the loss of blood, which had been considerable, and had it proved obstinate and recurred, a serious result was apprehended.

On another occasion, when putting in an artificial denture, he noticed that a loose root interfered with the adjustment of one of the clasps, and to remedy the matter, removed it with the point of an excavator. Two days afterwards, the patient returned with the blood flowing from this shallow socket. In the interim, she had been to a druggist, who had attempted to arrest it with perchloride of iron until the mouth was perfectly blackened with it. The bleeding was stopped in a short time, by a steady application of the styptic colloid.

In one instance, which occurred to him, the hæmorrhage recurred,

in the mouth of a patient after it had been arrested for one or two days. He had, when occasion required, used the saddle-shaped piece of cork to keep the plug in position, as referred to by Mr. Wilson, and found it very efficacious.

Mr. FINLAYSON mentioned several cases which had occurred in his practice, similar to those spoken of in Mr. Nicol's paper, particulars of which he gave to the meeting.

In treating hæmorrhage proceeding from extraction of teeth, he made sure that all clots, were cleared out, these being, in his opinion, the main cause of the bleeding, as they were generally of a soft fibrinous character, containing fluid blood in their substance, and of a spongy nature, thus serving to keep the wound open. This having been accomplished, the edges of the gums were steadily and firmly pressed together with a slipping motion of the finger and thumb, and a previously prepared saddle of dry lint bound with floss silk, to prevent change of form or absorption, carefully adjusted to bring pressure to bear on the sides of the gums—more than on the top—the depth of saddle being so arranged, that it came first in contact with the opposing teeth or gum. He had never plugged the socket.

In all cases, a chin bandage ought to be applied to prevent the lower jaw pressure from being removed for, at least, five or six hours—milk diet, quiet, a sitting posture, and coolness of surroundings being insisted on. Many cases of bleeding owed their origin to the administration of stimulants before or after the operation, and he had, for some years, adopted the rule of cautioning patients, either in hospital or private practice, to avoid the latter when unusual bleeding occurred in the surgery.

Mr. F. mentioned the case of a boy, eight years of age, who had taken out one of his own teeth; the resultant hæmorrhage being so profuse and continuous, as to defy all treatment. Those in attendance were expecting death; the pulse being almost imperceptible, and the countenance pale to a degree. In this case, the bleeding stopped short of causing a fatal result, and the boy made a rapid recovery, being seen a few weeks afterwards running about apparently well, but with that delicate complexion peculiar to those of a hæmorrhagic habit—the mother was a "bleeder" also.

Leech bites had sometimes proved troublesome, but, as a rule, the cleansing away of all soft stringy clots, and the application of moistened matico, or the lunar caustic point, with immediate and continued pressure, dry lint pads being used, had always proved sufficient to stay further bleeding.

A very good internal remedy, in cases of this sort, he had found to be an acidulated solution of sulphate of magnesia, which, given every hour, acted as a depressant and astringent.

Mr. MUNRO made a few remarks to the effect, that if in a case of alveolar hæmorrhage the blood was seen to issue in small jets from the socket, or there was reason to suspect the partial rupture of a small artery, it would be advisable, before applying the plug and pressure, to pass a small sharp instrument down into the socket and completely divide it, and thus give natural hæmostatics a fair chance by allowing the inner coats of the artery to retract within the sheath, and afford a better opportunity for the blood to coagulate.

Mr. MACKINTOSH had found the styptic colloid most valuable, and had also, in one or two instances, had occasion to tie up the

jaw in the manner indicated by the previous speakers. He had also found water, as hot as it could be borne in the mouth, very effectual in arresting primary hæmorrhage.

The PRESIDENT said—That the paper with which Mr. Nicol has favoured us, is a good and interesting one, is evinced by the hearty way in which it has been discussed. Few practitioners of any length of practice but have had, at one time or other, considerable concern regarding the ultimate issue of some case of persistent or of secondary hæmorrhage. I fancy, however, if I may judge from my own experience, that there is seldom any cause for grave apprehension, the cases being few and far between which do not yield to careful and rational treatment. I would take exception to the general statement of Mr. Nicol, that where you have a predisposition to bleeding, not more than one tooth should be extracted at a sitting. I find, in practice, that the greater the number of teeth removed, the less proportionately is the hæmorrhage which follows, and this fact I would illustrate by analogy. Consider, for one moment, the teeth to represent so many tenements in a street, and that each house is supplied with water by branch pipes from the main. The total calibre of these branches is greater than the calibre of the main. Open one branch, the pressure is great; open two, and the pressure is reduced; open them all, and the pressure is reduced to the minimum. So with the blood-vessels, by opening more branches you reduce pressure and give every chance to the tonic and contractile powers of the vessels to close up upon the clot forming with the sheath, and making a firm and non-porous plug. The large clots, seen in bleeding cases, result from a too rapid coagulation, and are consequently porous and spongy. Hot water, as a styptic, is a very useful application, the heat of the water should be about 120 degrees Far., hotter will scald and destroy the tonicity of the vessels, as well as impair the integrity of the clot, while the action of water at, or about, 120 degrees is that it expands, the vessels, encourages coagulation, and the vessel being expanded during coagulation, upon cooling down to the normal temperature, contracts and compresses the clot and renders it more dense. Cold water, on the other hand, being a capital solvent of blood—encourages bleeding—when cold is applied to a bleeding vessel or surface, it must be applied in a dry form. I use a very similar compress to that described by Mr. Wilson, using “Godiva” or “Stent” instead of cork. Within the modelled compress, I place cotton wool, and super-saturate it with collodion, placing it in position, and fixing the under jaw with a two-tailed bandage. This I sometimes precede with a lead and opium pill. I never plug the socket—firstly, because I obtain better results without it; and secondly, because the removal of the plug is apt to induce a recurrence of the hæmorrhage. As for Richardson’s Styptic, while admitting that it is an excellent styptic, I think better results are obtained by the use of *pure collodion*, the presence of the tannin either being inoperative, or if operative, it must be dissolved from out the collodion sheath, and render it less strong and valuable as an impervious covering.

I am glad that Mr. Munro has called attention to one cause of bleeding, perhaps more frequently attending tooth extraction than we are apt to admit, viz., the rupture of some small artery. The simple cure in such a case is, as Mr. Munro has pointed out, to take a fine pointed lancet and cut the artery through; the mouths of the severed artery will then contract and the bleeding cease.

I have much pleasure in conveying the thanks of the Society to Mr. Nicol, for his most admirable and instructive paper.

The President announced that the next meeting would be held on Thursday, February 10th.

Students' Society of the Dental Hospital of London.

THE Annual General Meeting of the above Society, was held at 40, Leicester Square, on Monday evening, January 17. The following gentlemen were elected as office-bearers for the year 1887 :—

PRESIDENT.—Frederick Canton, M.R.C.S., L.R.C.P., L.S.A., L.D.S.

VICE-PRESIDENTS.—Herbert S. Parkinson, L.D.S. ; H. Lloyd Williams, M.R.C.S., L.D.S.

HON. TREASURER.—Herbert Williams, L.D.S.

HON. SECRETARIES.—Walter J. England, L.D.S. ; Charles F. Rilot, L.D.S.

CURATOR AND LIBRARIAN.—James F. Colyer.

COUNCIL-MEN.—The following names were proposed at the last meeting for the vacancies on the Council. *Second year's students* (Five to be elected). R. Ackland, A. P. Cater, T. E. Constant, A. R. Colyer, C. R. Morley, H. Picton, T. S. Rendall, C. C. Robinson, G. Seymour. *First year's students* (Four to be elected). R. H. Bates, W. H. Dolamore, F. A. Harsant, H. W. Holford, W. A. Hooton, A. D. Horne, E. A. Manton, F. C. Porter, A. C. Pritchard.

REVIEWS AND NOTICES OF BOOKS.

A PRACTICAL TREATISE ON MECHANICAL DENTISTRY,
by JOSEPH RICHARDSON, M.D., D.D.S. Fourth Edition. J. & A. Churchill.

THIS largely amplified re-issue of the favourite standard textbook on the subject, will be welcomed as almost a new work by those even best acquainted with the previous one of 1880 ; which was perhaps the most exhaustive treatise in the prosthetic department of dental literature. With no less than 458 illustrations, or 273 more than the last edition, several important chapters added, and all enlarged, the present book demands more serious attention than that bestowed on a mere reprint. In a new introduc-

tory chapter the author elevates the tone of his work by a modest but dignified vindication of the professional aspect of the "mechanical" part of dental practice. He says, "In this special field of humane endeavour the highest order of qualification is imperatively demanded for the complete fulfilment of its diversified and complex requirements. No one can be said to be properly equipped for its duties, who has not a more or less familiar acquaintance with such of the several branches of physics as relate in any manner to his special work, while an exact knowledge of the anatomy, physiology and pathology of the tissues or structures in any way related to the substitute, is absolutely indispensable. Added to such qualifications is the essential requirement of the highest order of manipulative skill."

These not untimely considerations Dr. Richardson supplements by some admirably conceived observations on the undoubtedly pressing claims of the necessitous afflicted to adequate, but inexpensive relief, and the profession's resources in providing unobjectionable, if possible artistic—and not too costly forms of substitution. The consequent obligation to make the best and highest use of the so-called cheap methods and perhaps inferior forms of replacement is discussed with large and just discrimination.

In deploring that the facility of construction afforded by the simple methods and materials has attracted to the profession a mercenary and unscrupulous class, ignorant or regardless of all æsthetic requirements, the author thinks "the responsibility for the continuance of this evil will rest largely with the profession itself." It is therefore cheering to learn that in the United States, according to the opinion of so eminent an American, "there is reasonable assurance that the era of irresponsible quackery is fast passing away." After referring to the Colleges and Examining Boards, he says, "A faithful execution of the trust reposed in these bodies will go far to redeem prosthetic practice from the undeserved reproach brought upon it by a prostitution of its legitimate resources, wholly unworthy of toleration and utterly destructive of all sense of professional self-respect."

Of the technical novelties added to the book it is impossible to speak critically, when so large a field is covered in such detail. Whole, new and extensive chapters are devoted to "crown" and "bridge-work," with most astonishing complications and fearfully wonderful constructions; from which, however, suggestive ideas

may be gathered, and permanently useful methods may be evolved. It is curious to note that only the *names* of some things are new; as (for instance), the *term* "bridge-work," though heading a long and elaborate chapter in this edition, is not to be found in previous ones: but the *idea* itself is well described in former issues, less elaborated, among "partial dentures," &c.

In this class of work the "operative," or almost purely surgical, and the "mechanical" are often inseparable; and so much space is devoted to it that we are surprised at the total omission of reference to regulating devices, though the mechanical treatment of palatal defects is considered at length. But for the fullest information on all subjects treated, we should consider this valuable compilation indispensable.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Address delivered at the Pathological Society of
London.

On Tuesday, January 18th.

BY SIR JAMES PAGET, BART., F.R.S.,
PRESIDENT OF THE SOCIETY.

GENTLEMEN,—I thank you heartily for the honour you have conferred on me by electing me to be your president. It is a compliment that I should still be thought fit to be president of a society of which the most active members are much younger men, some of whom are studying pathology in subjects and methods almost unknown to me. If I can be at all fit for the office, it may be because, in my very imperfect knowledge of the numerous methods in which pathology is now pursued, I can look with full respect upon them all; and, in fact, there are few things in relation to our science of which I am more sure than of this, that every possible method of study should be by all possible means promoted. And while I am president this shall be my object, so far as I may have

power. I shall not prove myself unwise if I do not take for the subject of my address that kind of knowledge in which alone I claim superiority over my hearers—namely, the personal experiences of the far distant past. It would be very pleasant to tell some of them, and might be amusing and flattering

to those who can compare the best modern knowledge with that which it has displaced. But it may be more useful to think and speak of what may next be done, and how to do it. For every increase of knowledge brings before us a larger and clearer view of the immeasurable quantity which is still to be gained. The more we know, the more can we see, if we will, how much more there is that we do not know.

I wish I could indicate all or many of the ways in which new knowledge is to be gained ; but I cannot. It is characteristic of modern pathology that, as it certainly surpasses all other sciences in the variety and complexity of its problems, so it offers work sufficient for the employment of nearly every variety and opportunity of the scientific mind. Pathology, as distinguished from practical medicine, used to be regarded as scarcely more than morbid anatomy ; but now there is in it work not only for the anatomist and physiologist, but for the clinical observer, the experimentalist, the minutest microscopist, the statistician, the chemist, the naturalist, the historian, the psychologist and yet more. I cannot pretend to be all these ; and I will not pretend to decide who has done the best work or is most likely to do it in the future. Only, it is certain that complete pathology must be constructed from the works of all these ; they are all mutually dependent, mutually corrective ; none can alone suffice, and none can safely be neglected.

But of all the methods of study, there are only two with which I have been much occupied — those, namely, of pathological anatomy and of clinical pathology in active practice. I can therefore speak of the future employment of only these two. But I will hope they may suffice, especially as the greater part of the members of the Society are engaged in them, and because we may justly believe that practice and pathological anatomy, if they be studied with the scientific mind and methods, will still contribute largely to the progress of the whole science of pathology.

I say practice studied with the scientific mind, because practice is often spoken of as if it were altogether distinct from science and inconsistent with it. We hear science and practice spoken of as in opposition, and sometimes as if they were mutually distrustful. I will not deny that strange contrasts of the practical and the scientific may be found among us ; but these contrasts are constantly becoming more rare, and it is an excellent influence

of this Society that it tends to cultivate the scientific mind and to maintain it in the practical life. For what practice may be depends in all respects, much more on the person engaged in it than on its own subject-matter. It may be for one a noble profession, for another a vile trade ; and in equal contrast it may be a mere useful art practised by one who has neither love nor knowledge of any science, or to the man of scientific mind it may be a thoroughly scientific study as well as an applied science. I could name many living in active practice of whose work a great part is as definitely scientific as is that done in any other section of biology. And so are the works of many who are gone. For example, I know no reasonable definition of science which would exclude the researches by which Bright attained the knowledge of the disease which bears his name ; or which, in a just history of pathology, would separate, as if they were of different merits, the clinical and the experimental researches from which we have our knowledge of the diseases of arteries and veins. Surely, it would be hard to name a discovery in biology which more deserves the name of scientific than does Jenner's discovery of vaccination ; and yet it was made in the plainest practical manner while he was a country practitioner. But observe, Jenner was a thorough naturalist, trained by John Hunter ; and I suspect it will be found that all the best advances in clinical pathology, the best not only in their utility but in their fitness for adjustment among the largest principles of our science, have been made by practitioners who were either by nature or by cultivation men of scientific mind. And it is as sure as anything of the kind can be that similar studies by men of similar mind will still attain as good results.

Practice is full of opportunities for science. Let me suggest only one group of them. Reflection on any day's work in practice may convince us that we have been using a good deal of knowledge or belief which we cannot explain by its relation with other knowledge, whether in pathology or any other branch of science. We may have given what are called specific medicines, or have advised some one in the belief that he was predisposed to some disease, or may have talked of functional diseases. Yet I doubt whether in any of these things there are more than unexplained facts ; and if there are not, then we may be sure that the facts are very hopeful beginnings for scientific study by those engaged in practice. I may illustrate this by the example of the use

of some of the specific medicines, such as that of quinine in malarial diseases, of mercury and of iodide of potassium in syphilis, of arsenic in many cases of psoriasis, or of bromide of potassium in some cases of epilepsy. Here are sure facts, practical and useful, as sure as anything in therapeutics. I would not call them scientific, for, so far as I know, they are isolated facts, and separate from what may be called general laws in biology. They are, indeed, the chief of those facts which, in some minds, bring our clinical pathology into discredit; for, being only useful and not scientific, they are cited as examples of unscientific practice. They are called empirical, and the empiric is deemed equivalent with the quack. Let me say, as in parenthesis, that I think we have here an example of the common fate of words in our language—that if a word acquires a discreditable meaning, its better meaning is gradually lost, and only the worse remains with it. For the empiric and the experimentalist are, I think, synonymous; and yet in pathology the one, having a degraded name, is now deemed a hopeless hindrance to progress, and the other is its hero.

But, however this may be, among these empirical facts modern scientific work in practice may win great riches for pathology. For the medicines I have named are not only remedies, but diagnostic tests; they prove differences among diseased conditions that in other things appear alike. The epilepsy which is averted by the habitual use of bromide of potassium cannot depend on the very same conditions as that which is not so averted; the ulcer which heals under the influence of mercury cannot be of the same kind as that which looks like it but does not so heal. Thus, as we all know, these medicines are tests; and we may guess that each of them detects the presence of some material belonging only to the disease which it cures. Here, then, is work for the scientific practitioner; he may find the material and more, if he will observe the facts in practice much more minutely, and record and collect them, and bring to bear on them as much light as possible from other sections of pathological science. They will yield more knowledge, and his practice will be promoted to a better title than "empirical."

Let me again refer to some facts which I have already mentioned, and which are now accepted in the largest principles of pathology. I remember that during my apprenticeship, more than fifty years ago, in a post-mortem examination of one who had

died with dropsy, a young Guy's man cut across one of the kidneys, and said, "Dr. Bright, of Guy's, says there is a form of dropsy which is always associated with disease of the kidneys." This was accepted by the practitioners standing by as a singular fact, and nothing more. I should find it difficult to tell now into what, with fifty years of scientific culture, that singular fact has grown. Or, again, could any fact stand more alone than did that of the use of vaccination as first observed by Jenner? And now it may be honoured as the first knowledge attained in all that wide range of pathology in which Pasteur's great work has been done, and to which Power and Klein have lately annexed their admirable discovery of the true source of the milk scarlatina.

There are many more of this group of the facts of which we have better knowledge in practice than we have in morbid anatomy or any other section of pathology. We are sure, for instance, that there are certain conditions which are justly called predispositions to disease; but in what many of these consist we are, I suppose, quite ignorant. There are diseases or disorders which we must be content to call functional, though I suppose none of us would hold that there can be any change in the working of a part without a change in its structure or composition. We know that certain disorders, such as typhoid and scarlet fever, are apt to be followed by certain other disorders, which we call their sequels; but we have not yet shown the changes of which the sequence is a necessary consequence. We know that different morbid conditions may be combined, as in diseases which we may call hybrid or mongrel; we can recognise many of these combinations during life; they are things to be "attended to," as we say, in treating cases; but of the allied varieties of morbid changes of structure or composition, and of the lessons they would teach, we know, I think, at present very little.

How may these defects be remedied? Surely, the best way will be by studying and minute scientific work in practice. I say emphatically minute work, for I think it can be proved by the example of other sciences that the more minute the inquiries and the facts obtained by them, the more sure and complete will the fusion of pathology become with the whole body of biological science, and the more will it thence gain.

Now, these more minute investigations may be made not only in the records of clinical observation, which may be far more minute than they are now, but, I venture to think, even in microscopic

examinations, especially if these be made whenever it is possible on the living as well as on the dead morbid structures. I would not, in any degree, depreciate the value of the knowledge gained by examining the well-defined structures which are shown in microscopic specimens prepared with hardening and staining and other fixing processes. They ensure a more exact diagnosis, and they may be studied deliberately and with comparison; but while they have all the value, they have also some of the defects, of botanical specimens dried and flattened in an herbarium. These are essential to accuracy in descriptive botany, and to the diagnosis of species and varieties, but the vegetable physiologists must study living things. The herbarium tells little of the true plant-life, and of many processes in which that life is expressed, such as the minute intra-cellular movements and others of the like kind. Things of this kind, and important differences among them, may be found if the method of examining still living tissues can be improved, and if it be the rule to examine each morbid growth or product both directly after its removal from the living body while it may be deemed still alive, and after it has been prepared for repeated examining by staining or other like processes. I venture to expect that by methods such as these, and with improving microscopic power, the sight may often reach far beyond the boundary of what as yet been seen, and will detect differences of structure or of movement in what we are at present obliged to call structureless. And, even beyond this, I would hope that the microscope, with microscopic chemical tests, will detect differences which must be referred to differences of composition rather than of anything that can be called structure, and yet not less decisive of distinctive properties.

But I will not go on thus hoping, and perhaps only guessing. Let me only add one warning suggested by that word "structureless." It suggests the recollection that we are all apt at times to submit to the fascination of promises of finality; to find comfort in believing that we have really reached a boundary: that something is really structureless: or that there is a protoplasm which is the same always and everywhere, at least in the same species; or that in apparently similar substances there may be differences of potentiality; as if in things material there could be differences of power or property without differences of structure or of composition. We should get rid of these idle-making fallacies. The protoplasm in every structure, or of every embryo, must be as

essentially different from that of every other as is the structure or the creature which in due time it may become; and these differences will be discovered by our successors if we—I mean you—do not discover them. And for one caution more. Let us never be content with present utility. Glad of it we may well be, and even proud, for science cannot be degraded by being useful in good things, and I suppose that of all utilities none can minister more happiness to those who most need it than ours may: but we must not be content with it as it is: it will be increased by every increase of our real knowledge.

Let me, before I end, again express my regret that I have been obliged to limit myself thus narrowly in speaking of pathology. Let me repeat that it is only because I have too little knowledge of other methods of study to speak of them definitely or even safely. But I earnestly hope that in our meetings we shall have contributions from them all, for all are essential to the progress of our science, and it will be a singular pleasure to me if, in my office as president, I can promote them. To do so will make my office very happy and very useful to me in helping me to avert that sad defect of old age, the indifference or dislike to the changes which come of the increase of knowledge. One sees that, as men grow old and wish for rest, they are prone to ask, Where are we to stop? I do not know more than this: that we must not stop where we are: we must go on and on, and we may be sure that they who work to find the truth will not work in vain—sure that with true work true good will come. So I will hope that it may be here during my presidency.
—*Lancet*.

NEW INVENTIONS.

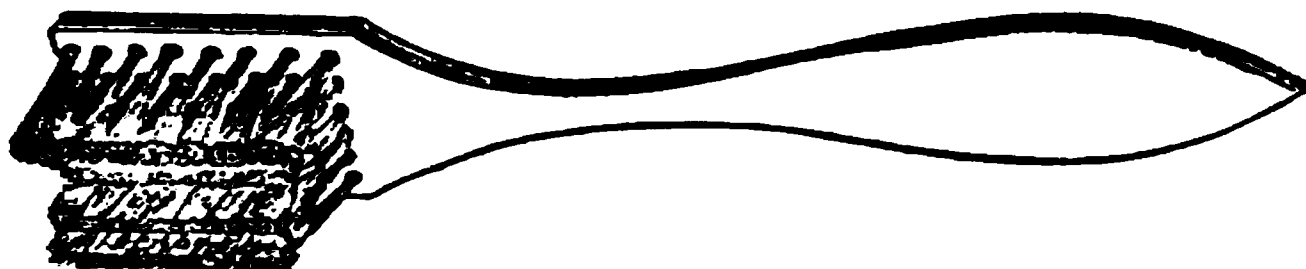
the Bright Platinum Plating Company.

We had submitted to us some specimens of a new method of plating instruments from the effects of rust, which appears every way satisfactory. The Bright Platinum Plating Co., 27, Clement's Lane, E.C., are introducing this method which consists in coating the instrument with platinum, the result of which is that the instrument is rendered absolutely impervious to rust, and presents an appearance of brightness, not so bright or white as silver, but something between that and steel. The extreme

hardness of platinum renders this coat very durable, even upon working surfaces and edges. The expense is about the same, roughly speaking, as that of good silver plating. Thus an ordinary sized excavator costs 6d. (in quantities), and an ordinary pair of extracting forceps costs 2s. 6d. (in quantities), old forceps which must be re-polished first, about 8d. extra. We can confidently recommend our readers to give the method a trial. We presume that the depôts are acquainted with the method and prepared to show specimens. The coating of platinum does not affect the sharpness of the edge of the instruments, a fact sufficiently proved by an order which the company have executed to coat all the knives in the operating theatre of a large London hospital. Of course a coat of platinum will stand more wear and tear than a coat of any other metal, and seems particularly suitable to instruments of all kinds.

A New Tooth Brush.

WE have received from Mr. Wall, of Dublin, a new form of tooth brush, of which the accompanying cut is an illustration :—



It is claimed for this brush that it will with greater certainty and in much less time, do the work of three special tooth brushes and not require so much thought nor manœuvring by the operator, and owing to the graduated strength of the hair at the sides of the brush, the necks of the teeth will not get furrowed nor will the gum be removed from them.

The brush should be used by placing it on the teeth, then moving it backwards and pulling it forwards, the handle being first slightly turned to one side and then to the other. The brush is made in three sizes : large, medium, and small.

Jamieson's New Gold.

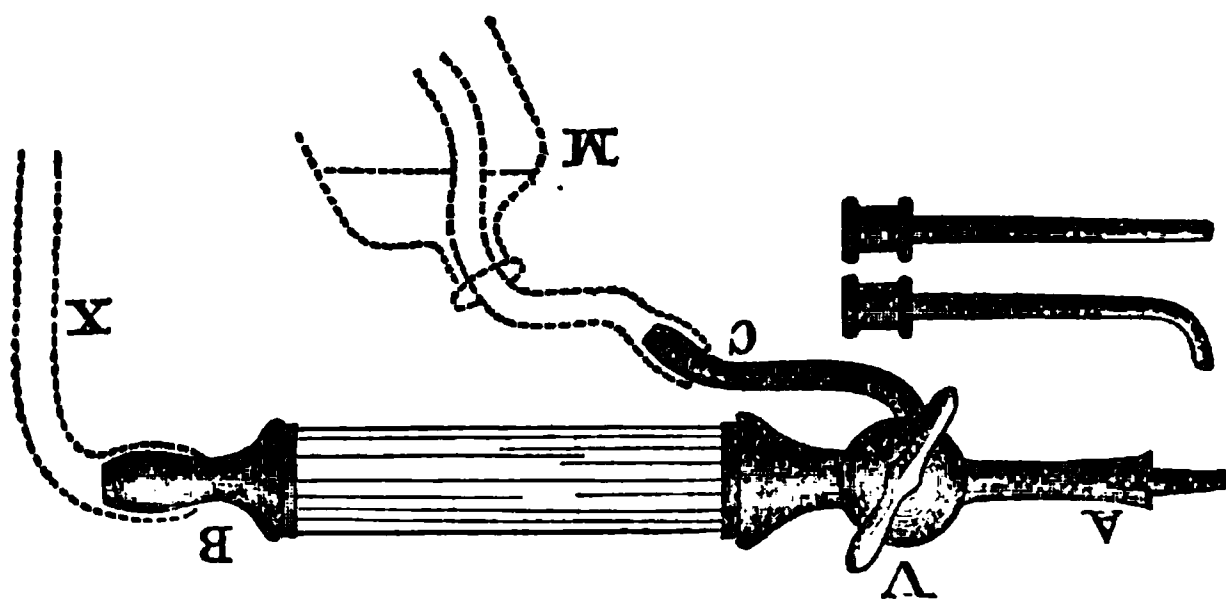
WE have received from Messrs. Jamieson a sample of some new gold cylinders prepared by them, labelled "extraordinary," and we are pleased to state after a careful trial that we can pronounce it most excellent as regards cohesion and ductability. The crystal

gold brought out by the same firm some time ago, produced a very favourable impression among the profession and elicited a remarkably strong series of approving letters from some of the most competent judges, and we believe this gold under review to be a still further improvement. The proof of the pudding is in the eating, and we should recommend our readers to make a trial of these pellets.

Rosenthal's "Aspirateur Antiseptique."

DR. A. ROSENTHAL, of Liège, has recently introduced to the profession in England, by personal demonstrations witnessed by our representative, a new antiseptic aspirator and automatic injector devised by himself (with the assistance of Dr. Fœttinger, of Belgium), for general surgical and dental purposes, which we are enabled to describe.

The instrument, as represented in the accompanying diagram, is constructed partly of glass for examination of fluid withdrawn, and is connected at B by a flexible tube X with any air exhausting device by which a partial vacuum may be maintained; an efficient "saliva ejector" with a good main water pressure, or high cistern full being the most convenient.



Aspirateur Antiseptique Rosenthal.

At A there is a cone fitting for attaching an aspirating needle, probe or cannula used. C is a branch tube leading (if necessary by a flexible connection) to any liquid or gaseous medicament or antiseptic; if liquid, contained in an open receptacle or bottle M.

V is a three-way cock controlling the bifurcation, so arranged that according to its three positions the nozzle of the instrument A communicates—(1) with the vacuum X, *i.e.* A to B;

(2) with the medicament M, *i.e.* A to C ; or (3) cut off from both, in which case the vacuum and medicament are placed in communication B to C.

The needle or cannula attached to the instrument having entered or been connected with an abscess or cavity to be evacuated, the cock is placed B to C (the exhaust to the medicament), till the branch tube C is completely filled with the antiseptic. The valve is then turned A to B, and the pus or other fluid, or a portion of it, withdrawn from the cavity. The cavity, within which a partial vacuum has been produced is then immediately placed in communication with the antiseptic or medicament (by turning the cock A to C) which enters it by atmospheric pressure only.

This is repeated with any desired rapidity, until by alternate exhaustion and injection the cavity is completely evacuated and washed out under antiseptic conditions ; and if required, treated with caustic or stimulating agents.

The chief application of the instrument in dental surgery is stated to be the treatment of blind alveolar abscess through devitalized teeth, the prompt radical cure of which is said to be ensured. The nozzle tube must, of course, be tightly sealed to the cavity of access, for which purpose an adhesive compound of wax is recommended.

Dr. Rosenthal also employs the instrument for periostitis and certain stages of pulpitis. We understand it is covered by an English patent.

ANNOTATIONS.

THE date of the next examination for the diploma of Licentiate of Dental Surgery at the Royal College of Surgeons of England, is fixed for the 22nd, 23rd and 24th of this month.

THE result of the election of two dental surgeons to the Addenbrooke Hospital, was announced at a special general court of the presidents and governors held on January 24th. There were three candidates for the appointment : G. Cunningham, B.A., Cantab., D.M.D., Harvard ; W. A. Rhodes, L.D.S., England, and A. Jones, Junr., L.D.S., Ireland. The result of the first vote was : Jones 29, Rhodes 33, and Cunningham 14. A poll of the governors was then demanded, and the result was as follows : Rhodes 183, Jones 151, Cunningham 111. In the previous

discussion all the speakers expressed their regret that they were unable to elect all three candidates. It was undoubtedly due to the energy of Messrs. Rhodes and Cunningham that the addition of a dental surgeon to the staff at the Addenbrooke ever took place, and we hope that ere long the hospital authorities may secure the services of Dr. Cunningham, who will certainly prove an efficient and energetic addition to their staff.

We have received the following circular, which explains its own object, and which will command universal sympathy without any comment from us :

Many of the personal friends of Dr. Waite, and members of the dental profession, were shocked a few months ago to learn that he has been compelled, through failure of sight, to relinquish the practice of his profession. He has been the indefatigable secretary of the Midland Branch from its formation, and has occupied a position in the front rank of dental progression and reform for some years ; and has given time, attention, and money, to every movement calculated to elevate and advance the profession of his choice. His friends, and the Council of the Midland Branch, think that his efforts are worthy of recognition in a substantial form, and have decided, at a Special Meeting of the members of the Council, convened at the request of the President, A. M. Matthews, Esq., and held at Manchester on the 11th December, 1886, to mark his retirement from active practice by presenting a testimonial to him in the form of *a purse of gold and an address on vellum* which the Council desire should be given to him at the annual meeting of the branch, which is to be held at Chester in April next. The Council, in making this appeal to the members of the B.D.A. and the profession at large, trust there will be a hearty response, and hope that all who can will readily contribute their mite to so worthy an object. Subscriptions will be received by A. M. Matthews, Mount Pleasant, Bradford, *President* ; T. Murphy, Springfield, Bolton, *Hon. Treasurer to the Fund* ; I. Renshaw, Drake Street, Rochdale, *Hon. Sec. to the Fund* ; or by any member of the Committee

WE learn that the following gentlemen have consented to represent the testimonial committee in various centres :—Midland Branch—*President* : Mr. A. M. Matthews, Bradford. *President-Elect* : Mr. Fred Bullin, J.P., Chester. *Treasurer* : Mr. Sidney Wormold, Stockport. *Council* : Messrs. Hy. Campion, E. H. Williams, and T. M. Kelly, Manchester ; Roff King, and W. E. Harding, Shrewsbury ; Hy. Blandy, Nottingham ; T. Murphy, Bolton ; D. A. Wormald, Bury ; Geo. Brunton, Leeds ; J. L. F. Sheffield ; I. Renshaw, Rochdale ; and T. Wormald, Old-

ham. London and Provinces—Sir Edwin Saunders, Sir John Tomes, Messrs. J. S. Turner, F. Canton, Jas. Parkinson, Alfred Woodhouse, Thos. Underwood, Chas. S. Tomes, T. A. Rogers, J. Walker, S. J. Hutchinson, Morton Smale, G. W. Parkinson, Felix Weiss, Hy. Sewill, J. Howard Mummary, Thos. Gaddes and S. Cartwright, London; W. Bowman Macleod, Edinburgh; J. R. Brownlie, W. Woodburn, and J. A. Biggs, Glasgow; Walter Campbell, Dundee; W. Williamson, Aberdeen; R. Theodore Stack and John O. Duffy, Dublin; R. Wentworth White, Norwich; G. Cunningham, and W. A. Rhodes, Cambridge; J. T. Browne Mason, and H. B. Mason, Exeter; G. C. MacAdam, Hereford; Jno. Dennant, Brighton; S. Lee Rymer, Croydon; R. Rogers, Cheltenham; C. H. Bromley, Southampton; Breward Neale, and Charles Sims, Birmingham; T. Fenn Cole, Ipswich; F. H. Balkwill, Plymouth; Thos. E. King, York; W. Ladyman, T. Dilcock, and W. H. Jewitt, Liverpool.

THE two discussions which we publish elsewhere, one upon hæmorrhage (Odonto-Chirurgical Society), and the other upon cocaine (West of Scotland Branch meeting), are full of interest and practical information, and should be read with care and attention. The symptoms experienced by one of our *confrères*, after the injection of only a grain of cocaine, are so unpleasant and even alarming, that the public and the profession will require a careful investigation of the subject to reassure them. If such very distressing results may supervene even in a small percentage of cases, we cannot but apprehend that the drug will gradually cease to find favour amongst us.

AT the Annual General Meeting of the Students' Society, National Dental Hospital, on January 14th, Mr. Willoughby Weiss, L.D.S.Eng., in the chair, Mr. Henri Weiss was unanimously elected President for the ensuing year, and Mr. Willoughby Weiss in his valedictory address, congratulated the Society on its present prosperous condition, and was gratified to find that on each evening of the session an interesting paper had been read. He then made some critical remarks on the development of the maxillæ in relation with the premature removal of the temporary teeth. After the usual votes of thanks to the retiring officers, the meeting adjourned. At an ordinary Meeting, held Friday, February 4th, Mr. Henri Weiss, in the chair, among other items of interest, Mr. Rymer, M.R.C.S., described cases of great dyspnœa and

distress after the use of cocaine. The meeting was adjourned until Friday, March 4th

It has been decided by the authorities of the Dental Hospital of London to hold a dinner of the friends and supporters of this institution, at the Hotel Metropole on Thursday, March the 10th, in commemoration of the Queen's Jubilee. In view of this fact, the Annual Student's dinner has been wisely allowed to stand over for a year. Sir James Paget has consented to occupy the chair, and it is to be hoped that the whole profession will assemble to do honour to the occasion and to the distinguished chairman. Gentlemen either now or formerly connected with the Hospital or Medical School, who may through inadvertence not have received special notice, and who desire to be present, are requested to communicate with the Secretary at the Hospital.

We have just received a proof sheet of the annual report of the Committee of Management of the Glasgow Dental Hospital. The report shows steady progress; the cases relieved last year numbered 6,825 as against 3,876 during the previous eight months. The lowest record was January, 476, the highest, November, 716; 1,374 cases had been conservative in character. The financial statement shows that as against £40 (principally donations) contributed by the public in 1885, the past year had produced £125 15s. 6d. in subscriptions, £15 13s. in donations, over £140 in all. After all, the sinews of war are essential to the success of an institution, and we hope to record a still greater progress next year.

THE first Annual General Meeting of the Students' Society, Victoria Dental Hospital, Manchester, was held at 98, Grosvenor Street, Manchester, on January 6th. From the Treasurer's report the Society was found to be in a very excellent financial condition, there being a credit balance of over £9. The following officers lectured for the ensuing year: President, L. Dreschfeld, ; Vice-presidents, G. G. Campion, L.D.S.; W. Headridge, ; J. H. Molloy, L.D.S.; T. Tanner, L.D.S.; Treasurer, Smale; Hon. Secretary, J. W. Seville; Council, C. H. y, P. A. Linnell. The next meeting will be held on Feb-
2nd, when Mr. Smale will read a paper on "Dental Thera-
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WE hear on good authority that it is proposed by the authorities of the medical School in Trinity College, Dublin, to raise the standard of the examination for the degree of M.Ch. (Master of Surgery); so that medical officers in the army, by passing this examination, can qualify for promotion to the rank of surgeon-major. It is also intended to introduce dental surgery as an optional subject in which specialists may be examined. It is hoped that this may lead to some further addition of dentistry to the other medical examinations.

THE contribution to cocaine literature from the pen of M. Viau (for the excellent translation of which we are indebted to Mr. Herbert Williams), which appears at p. 78, is one of the ablest and most complete and scientific statements hitherto published upon this interesting question. Our Gallic brethren do not seem to waste the opportunities afforded by their Dental School for scientific investigation and the recording thereof. It is an example that might be followed with advantage by all schools of dental surgery.

AT the annual meeting of the Chester General Infirmary held on January 25th, His Grace the Duke of Westminster, K.G., in the chair, Mr. Fred. Bullin, J.P., L.D.S.Eng., retired from the position of Hon. Dental Surgeon, which he had held for over 25 years, and in accordance with rule 43 of the institution, assumed the position of Consulting Dental Surgeon to the Infirmary, consequently there is a vacancy for an Hon. Dental Surgeon.

THE next meeting of the Odontological Society will take place on March 7th at 8 p.m. Business—casual communications by Messrs. J. Ackery, Henri Weiss, Vincent Cotterell, and W. Harrison (Brighton); paper by Dr. Dudley Buxton, sequel to his paper on the Physiological Action of Nitrous Oxide Gas.

WE are requested to correct a slight error in the list of donations published in this month's Journal; there is only one £3 17s. 2d. acknowledged from Mr. White, of Norwich, whereas two sums of this amount were given, one by Mr. Richard White and the other by his son, Mr. Richard Wentworth White.

ON the 18th of January last the Faculty of Physicians and Surgeons of Glasgow held an examination for the License of Dental

Surgery : one candidate, J. G. Biggs (Glasgow), was successful. Three gentlemen were referred to their studies.

THE annual meeting of the Edinburgh Dental Hospital was held on the 25th ultimo. The reports showed a most encouraging advance on previous years, the number of patients amounting to about 7,000. Of these 1,800 were cases of fillings. Several obturators, &c., were supplied to patients in connection with the class in dental mechanics. The Treasurer's report showed a slight surplus.

THE Annual Dinner of the L.D.S. and members of the Odontochirurgical Society will take place in the Balmoral Hotel, Edinburgh, on Friday, March the 11th. Dr. Waite, of Liverpool, will occupy the chair, and Mr. Biggs, of Glasgow, will act as croupier.

THE following curious advertisement has been appearing in the Edinburgh papers of late :—"Artificial Teeth, one guinea per set. *Though second-hand equal to new.* Five years' guarantee. Address, No. 180, Evening News." What does it mean? Has it anything to do with the Californian method of transplantation?

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

Foreign Diplomas.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—As the presence of a fresh name in the correspondence under the heading of "Foreign Diplomas" may be taken as an indication that your readers are not uninterested in the discussion now going on under that heading, I again beg to be allowed a word in reply to both your correspondents in the last issue of the Journal. As I believe no one will be interested in my splitting hairs with Mr. Lloyd Williams as to the meanings of words or in discussing the demerits of quack publications, I shall pass on to that part of his letter which touches the question at the bottom of this discussion, namely, the propriety of Englishmen under certain circumstances taking the D.D.S. degree. In the latter part of his letter Mr. Lloyd Williams presents for our consideration a table drawn up from the pages of the Medical Directory. It is a little difficult to decide precisely what inference he would have us draw from this table, but from the remarks preceding and following it would appear that he considers it eminently unsatisfactory.

I thank Mr. Lloyd Williams for the interesting table he has put before us, but I take a different view of it to what he does, and I am glad

to find that at least thirty-one *sine curriculo* men have supplemented their reading by taking even as little as six months of curriculum work.

It may fairly be argued that the six months might have been spent in an English school, but I think it is no reflection upon the teaching staff of our schools to argue that what I may describe as the American alternative, offers advantages to the class of men under discussion, which could not be obtained by six months work in any English school.

The advantages I refer to are the following : The shorter and more condensed course of study would be more suited to their requirements, the stimulus of studying for a degree would make them work more systematically, the complete change of environment would bring them in contact with men trained under local conditions differing widely from those which prevail in England (and in this connection let us remember how much we learn from contact with our fellow students) ; then, lastly, the stimulus of having to maintain as representative foreigners the reputation of their country for intelligence against keen American competitors might galvanise even what Mr. Tod describes as a "regular chronic" into some show of intellectual activity. I have assumed for the sake of argument, that the thirty-one have only fulfilled a six months' course of studies, but if Mr. Lloyd Williams thinks that only the Harvard men fulfil a respectable curriculum, the following facts will, I think, prove to him that he is mistaken.

While I was studying at the dental department of the University of Michigan, an English fellow-student, L.D.S.I., *sine curriculo*, had to fulfil a curriculum of two winter sessions and one summer session before taking his diploma. I myself having to fulfil similar conditions. Since then the curriculum has been extended and another L.D.S.I., *sine curriculo*, at present in residence, will have to fulfil a course of study extending over two winter sessions and two summer sessions before graduating.

While in London last August I met a dentist from Australia who had traversed the United States, and had failed to find a college that would permit him to graduate with less than two years' work.

I think these remarks will suffice in reply to Mr. Lloyd Williams. I will now, with your leave, Sir, turn my attention to the letter addressed to you by Mr. Tod. In reply to this correspondent, let me say that I find myself in the pleasant position of being able to agree with him on the main point of his letter, which is that Englishmen holding the American diploma should not assume the title of Dr. This, I think, would only be a fair concession to the spirit of true comradeship which ought to prevail amongst us, and would do much to soften the asperities of the competition which must prevail in practice. As for the use of the title Dr. in our Societies and Journals, I do not think the issue is of real importance as those using the term understand its significance, and, according to recent indications are more likely to underrate than to overrate it ; besides, as I explained in my last letter, the American graduate could hardly check the use of his title by courteous acquaintances without to some degree reflecting on the institution from which he graduated. I think it would be most unfortunate if any mere question of diplomas were to split the rising generation of our profession into two hostile camps, and all those who have the welfare of their profession at heart should strive to avert any calamity of this kind.

Let us call a truce then to petty feuds about diplomas. If each of us.

remains true to the highest teaching to which he may have listened, but little divergence in practice will be found amongst those who graduate from schools justly claiming to rank as first class.

I am, dear Sir, yours faithfully,

CHARLES M. CUNNINGHAM.

Cambridge, February 4th, 1887.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—To my sincere regret, I find that one or two practitioners have taken personal umbrage at my letter on American diplomas. Do allow me, Sir, to say that when I sat down to write that letter I banished from my mind *all personalities*.

It only struck me after I had written the letter, that at least *one* personal friend of my own holds an American diploma, and it would be, indeed, a most unlooked for issue, if my letter should produce estrangement from those who have hitherto been held in esteem and respect by the writer ; but I will not believe that this is possible till I know that it is a fact. To one gentleman I have already written, and I may add that I hope I have shown *him* how earnestly I desire to avoid *all personalities*.

What is my position? It is one of open criticism, neither more nor less. For many years I have heard all these things spoken of in private, and sometimes with acrimony. I, at least, am open and above board and have *no* acrimony. Do let me point out that it is no ill-natured *attack*, but a perfectly justifiable criticism, capable of being reasonably replied to.

There are many who, like myself, have sons to send out into the world, and it behoves all such to have this question, which is, after all, more important as a question of the future than of to-day, finally settled by a consensus of *English* professional opinion.

A friend has placed in my hands the January number of the INDEPENDENT PRACTITIONER, published by the New York Dental Journal Association, the leading article of which is "Dentistry not a Speciality in Medicine," by Norman W. Kingsley, D.D.S. The whole gist of the article may be summed up in one of Mr. Kingsley's sentences : "Dentistry must be taught in dental schools, and dental schools must teach everything that a dentist needs to know which pertains to the practice of his profession."

Now this is the *real issue* freed from stupid personalities, which are as ignoble as they are beside the question, and it is one of very great moment, for it is Dental Schools alone which confer the degree of *Dental Doctor*.

Such then are the views of an eminent D.D.S. Place along side of them the views of an equally eminent English practitioner who has fought for and attained both general and special degrees to fit him for his calling and *to elevate that calling* until it is recognised as a branch of the medical profession ; a surgical branch more particularly.

My contention is, that if D.M.D. and D.D.S. have the right to the title of Doctor *in England*, the English College of Surgeons must see to it that they do not lose in the long run, for it is a temptation to secure the American diploma if the public recognise *that* more readily than the L.D.S. England, simply because the English practitioner contents himself with the title of Mr., whilst the American assumes the title of *Doctor*.

My letter merely points out that it seems an injustice to English students who, at the present time are going through a full surgical or medical course, as well as a special training, that any man who has the time can run over to America and secure at least a D.D.S. diploma before the other has got through his mere primary examination, and it is surely worth while to weigh the two degrees in the scales of justice.

For a long time this question has been simmering, now it is boiling over, the sooner it is cooked the better ; yes, eaten and digested as well.

We may expect some most interesting letters from our American *confères*, and if they can only prove their claim and bring good sound arguments to bear, no one will give them a more ready ear than your correspondent,

E. M. TOD.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—With the whole spirit and main point of Mr. Tod's letter in your issue of last month I cordially agree. From an English point of view nothing is considered in worse "form," nothing more unusual, than the use of the title of doctor by a practising surgeon ; and it is a rare thing to find a surgeon—that is a practitioner of *surgery*—specialist or not—of good professional position, possess though he may a high medical degree, who uses his right to dub himself doctor. The greater number of British hospital surgeons (Metropolitan and provincial) hold high medical as well as surgical degrees. Many of them are M.B. London, a degree which is probably the most difficult of any to attain in the world, calling for more brains and more work than any other. They, as a rule, do not proceed to the M.D. ; which, however, being conferred after examination in logic and moral philosophy is not really a higher grade than the M.B. It will, I venture to say, be difficult or impossible to find a holder of this distinguished qualification who uses it or parades it ; and it will be known only by his colleagues and the profession that he does hold it, and whether he took honours in his examinations or not. If this is the feeling among the *élite* of the profession, what must be thought of the man who, on the strength of possession of some foreign or provincial University diploma in medicine or dentistry, ostentatiously parades himself as "Dr" ? There can be only two motives, vanity, or desire to puff himself before the public as superior to the mere *misters*—his professional brethren—who it is well understood, often hold surgical qualifications, such as the F.R.C.S.Eng., which, although not conferring the right to the title doctor are a guarantee (to the those who know) that their holders are men of high attainments and superior intellect.

If things go on as they now promise, it will shortly come to be as disgraceful for an English dentist (and for an American practising in England) to style himself doctor as it would be to advertise himself as "THE old established dentist." It is a fact which many members of the B.D.A. do not seem yet to have grasped, that the dental branch of the medical profession is, thanks to our special dentists Act, in advance of the rest of the profession in penal powers. An unqualified man can (and does) style himself doctor with impunity ; whereas the same individual using the title dentist or assuming any title pretending to be a *dental* qualification may be summarily punished by a magistrate. It is impossible to convict a man of any offence against the present law who chooses to call himself doctor. Summon him

before a magistrate and he need only produce a bogus diploma, say of the Rocky Mountain College of Dental Surgery, and the magistrate cannot convict. The Medical Act of 1858 enumerates the titles which a man may *not* assume, and the general title *doctor* is not included in the list. A man may say he is a doctor of philosophy or of mesmerism—for he need not put M.D. after his name, although he calls himself doctor. Cases of this kind have been tried, and have been taken through the High Courts, and quacks, infamous quacks, have gone scatheless, until they have infringed the Apothecaries Act (a legal technicality which I cannot enter upon) or destroyed a patient by mal-praxis.

Hence, we find the new horde of quacks, calling themselves Americans (the advanced guard perhaps, of an army), who are now invading our liberty-loving island, are very careful to avoid the title dentist, while parading and dwelling upon the fact that they are all doctors. When Lord Castlereagh was ambassador at St. Petersburg, he appeared at a great court function without a single decoration amid a crowd of princes, potentates, and diplomatists covered with jewels and orders; and yet he was remarked upon as *le plus distingué* among them all; and so the man who makes least parade publicly of his degrees and qualifications will, I trust, now and always be, in this country at least, much more distinguished and honoured than his noisy neighbour who cannot trust the world to find out his merits, but is obliged to blow his own trumpet and proclaim them loudly for himself.—I am, yours obediently,

M.R.C.S. and L.D.S.

The Use of the Elevator.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Responding to Mr. Harding's request, *re* accidents in the use of the Elevator, I gave the three worst cases I could recall during the last two and twenty years. In your September issue "An L.D.S. who has held," &c., replies that these cases "certainly tend to strengthen rather than to weaken" his argument, that "the Elevator should never be used for the extraction of any tooth in the *upper* jaw, as so many accidents are liable to occur"; and he thinks that every impartial reader will agree with him. There are two temptations common to scientists as well as to theologians: to build inverted pyramids, to draw great conclusions from absurdly small data; and, to believe that what they see or think they so distinctly see, only that and nothing more will or can be seen by others. Granted, let us suppose, that these three aforesaid casualties tend to confirm the dogma of "An L.D.S. who has held," &c., that the Elevator should never be used for the extraction of the upper teeth,—no "impartial reader" will fail to note that other portions of my letter tend to a very different conclusion. The only argument that these three "worst cases" strengthen is, I submit, that,—since serious accidents may occur in the use of the Elevator, whether for upper or lower teeth, therefore habitual caution should be observed. But so much and more may be said as to the use of the forceps. I repeat the belief that the percentage of casualties is higher and of a more severe character in the use of the forceps than in the use of the Elevator.

Allow me to select three other cases, not by any means the worst cases of casualty with the forceps that dental history records or might

record, but three typical cases of casualty to upper teeth in the use of the forceps in which that instrument had to give place and yield the palm to the unpretentious Elevator.

a. The first case is that of a badly decayed left upper canine. The patient, a man about 45 years of age, was first placed under chloroform for a quarter of an hour. Vigorous attempts were made with the forceps, but without success. After an hour's interval he was placed under nitrous oxide gas, and had hardly recovered consciousness when chloroform was again applied and the patient kept under its influence for at least an hour. The operator was accustomed to extract and confident of success, yet he laboured in vain, save that he broke down the stubborn canine more completely and bruised and lacerated the surrounding parts by determined and prolonged efforts both with the forceps and with the key. Moreover, the excessive administration of anaesthetics nearly cost the patient his life, who awoke with an intolerable sense of oppression at the heart, with the canine still holding its own and causing intense suffering. This case corroborate I can, for I had the misfortune to be not indeed the operator but the patient. The fang was subsequently and readily removed with the Elevator.

b. The second typical case is that of a left upper second molar broken low down by a pharmacist. It might have been broken down by a more professional hand, for it was very large and firmly planted. The round-edged remnant defied the forceps, but was removed by applying the Elevator laterally, making the first molar a fulcrum, and then to the buccal edge.

c. The third case is that of right upper first molar also crushed and broken lower down by the forceps of a pharmacist. The patient, a sturdy young woman, had suffered agonies since the casualty, and was brought to me by a *confrère* for consultation and administration of the nitrous oxide gas. Our joint and repeated efforts with the forceps failed, but by placing the blade of the Elevator between and slightly below the union of the buccal fangs, I removed it *en masse*, the anterior fang being unusually hooked.

These two cases occurred within the last few weeks. They were too much broken down to attempt the use of the dividing forceps, and they illustrate what I termed that "legion of cases in which without the Elevator, endeavour would sink deep as our despair."

Now, after each of these casualties with the forceps there was great suffering, acute, intolerable, and in each case the offending tooth was left in. After the three "worst cases" with the Elevator there was no intense pain, and in all three the enemy was expelled.

Allow me to ask "an L.D.S. who has held for many years," &c., with "every impartial reader," what argument these three forceps-cases "tend to strengthen rather than to weaken"? What; but the conclusion that the *forceps* "should never be used for the extraction of any tooth in the upper jaw, as so many accidents are liable to occur."

I have said I am indebted to the late Mr. H. R. Rowe, of Preston, for introduction to what has proved in my experience the most useful form of Elevator. At the risk of egotism, I beg to recall the occasion

A patient, a lady between forty and fifty, robust and large-boned, had extraction on the brain, and was determined against all entreaty to the contrary, to have every fang and tooth removed. Her medical adviser was unaccustomed to give chloroform for extraction and simply induced and kept up the excitement stage; she was, of course, restless and resistant, and it was extremely difficult to operate. Conversing

with Mr. Rowe upon the case, I told him I had been unable to remove the fangs of the upper canines and of a right and a left upper bicuspid. He remarked that for those cases he should have used the elevator, and at once showed me the form he would have used, at the same time offering to lend it me.

I arranged for another administration and for another medical chloroformist. Within twenty-five minutes entire insensibility was induced, I had removed the four fangs with the elevator and the patient had revived. That was the first time I had used an elevator of any kind, and this one act of fraternal kindness on the part of the late Mr. Rowe to me and through me to many other lives, has lived and will live in my grateful regard.

I beg to add, in all due respect to "an L.D.S. who has held," &c., that *anonymous* professional correspondence is rarely necessary and in future will not be answered by yours faithfully,

Auckland, November 26th, 1886.

EDWIN COX.

The Dental Hospital Athletic Club.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—It has been whispered to me that the circular sent to the old students of the hospital announcing the formation of this club, has been considered by some to have been open to the suggestion of "sending the hat round." Will you allow me to state through your columns that nothing was farther from the minds of those who framed the circular. The club is formed and promises to be a success; the football section has already won one match. The cricket and tennis department will soon be at work; they are only waiting for the season. The reason the circular was sent was, that old students might be kept informed of the doings of the hospital, and it was hoped this society might be an additional link to connect "the past and present."

Your obedient Servant,

MORTON SMALE.

APPOINTMENTS.

HENRY BLANDY, L.D.S., R.C.S.Ed., and Irel., has been appointed Hon. Dental Surgeon to the General Hospital, Nottingham.

J. MOORE LIPSCOMB, L.D.S., R.C.S.Eng., has been appointed Dental Surgeon to the Kilmarnock Infirmary.

JAMES F. RYMER, M.R.C.S.Eng., has been appointed Assistant House Surgeon to the National Dental Hospital.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their Subscriptions for the current year were due on the 1st of January, and should be remitted to the Treasurer, at 40, Leicester Square.

According to the Bye-laws of the Association, Members who are one year in arrears are not entitled to receive the Journal.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. 3.

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VOL. VIII.

The General Medical Council and the
Dental Fund.

THE conversation which took place at a recent meeting of the Medical Council, and which is reported at page 163 on the subject of Dental Finance, is one which is fraught with grave issues in regarding the future of dental progress and education in this country. We, therefore, gladly avail ourselves of the opening thus afforded us to call attention to some points, which could hardly otherwise have been raised save in the form of a definite complaint.

Regarding the question of Dental Finance, we have all along been of opinion that although the reason for paucity of funds is not all to be laid at the door of the Medical Council, nevertheless the very rapid absorption of capital was due to the way in which the dental business had been managed, and to the *pro rata* charge of one-quarter (while

the dentists are only one-fifth, according to Dr. Quain's own showing) which has been made on the dental fund as its share in the general expenses of the Medical Council; and notwithstanding the assurance of Dr. A. Smith that the administration had been made as "economical as possible," we are still emphatically of the same opinion. Indeed we do not think that it would require much ingenuity to show that while we have never contemplated such unfairness to the medical profession as that of "asking them to contribute funds for carrying out the Dental Act," the Medical Registration Fund, on the contrary, has been a distinct gainer by the embodiment of dental business with the general routine of the Medical Council office.

For the year just passed, the accumulated capital of the dentists' fund was mulcted to the extent of £1,000, to which must be added, for interest and fees received for registration, some £400 more.

The expenditure then was, roughly speaking, £1,400, and for this all that there is to show is the correction and publication of the Register, and the addition to it of twenty-five new names, though, of course, that is not an altogether fair way of putting it. It may be noted that the cost of registration is thus brought to £50 a head. But it is certainly not unfair to suggest that the cost should bear some proportion to the work done, and that if there is not very much work to be done, then there should not be any great expenditure in the doing of it; and if the cost has been thus disproportionate to the work done, it is perfectly clear that the dental fund has directly or indirectly been paying for expenses incurred in the general medical registration.

However, this is not the place for a minute examination of the accounts of the Medical Council, nor for a comparison of the work effected with the monies expended, though we propose to return to the consideration of that aspect of the question at a future time.

As to the economies which might be practised, they are in our eyes so closely allied with many of the supposed unavoidable expenses of the Council, that we must at present leave them to be considered when the Council itself shall have to set to and put the Medical Registration Accounts in order, for it requires no great powers of foresight to see that with its enforced expenditure under the new *régime* the Medical Fund is quite as likely to arrive at a vanishing point as the dental one.

Dr. Matthews Duncan came unconsciously near touching upon one of the great mistakes committed by the Medical Council in the management of dental business. He most innocently asked if the dentists themselves had been communicated with "as to the unfortunate position in which their monetary affairs stood." Seeing that we have had but little to do with the spending of the money, it is rather late to appeal to us now that it is gone; and to seek information as to how money is to be saved has not hitherto been the method of those who have had the spending of the Dental Fund. We well remember a remark made by Sir William Gull towards the close of a protracted debate on what ought to be demanded from candidates in the preliminary art examination; Sir William remarked that much time and trouble might have been saved if the Council had enquired of competent authorities what amount of education might be imposed upon the average schoolboy up to a given age.

It is perhaps not known to all of our readers that the members of the Medical Council receive fees of material amount for each day that the Medical Council sits, those who reside at a distance receiving in addition hotel and travelling expenses. It would be interesting to calculate how much this almost useless debate upon preliminary education cost, and to estimate how much

might have been saved had the Council sought information from those well qualified to give it, instead of trying to evolve it from the utterances of a number of practising medical men who for years and years have had nothing whatever to do with general education.

In the same manner has the Council treated the only representative dental body with which it could communicate. The representations of the British Dental Association have sometimes been received with scant patience, and on one occasion the President of our Representative Board was assailed in a most unwarrantable manner in a Medical Council Meeting, by one of its leading members, because he had attended on an invitation to give any information that might have been required during the discussion of dental affairs. We could also point out at least one occasion upon which the Council acquired for themselves, at heavy cost to the Dental Fund, information which the British Dental Association was ready to give them.

The Medical Council meets but seldom, and but a very small portion of its time has been devoted to dental business, and that not always to good purpose. The Dentists Act was only passed in 1879; surely the time is too brief for a mal-content member of the Dental Executive Committee to succeed in persuading the Council that it cannot administer it. For our own part, we are too well assured of the distinct advantage to our profession which arises from our connection with the Medical Council to be anxious to sever ourselves from it, or to be driven away from it, or to relinquish the hope that the Council may yet honourably and satisfactorily discharge the duties which it has undertaken.

That we are as a body well represented as well as sometimes misrepresented on the Council will be obvious to those who know its constitution; not only have we friends.

who take a lively interest in our affairs, as may be seen from the conversation on which our remarks are based, but we are represented by the members returned by the different bodies who issue dental diplomas, and if these gentlemen keep themselves informed as to the interests of their dental licentiates, we doubt not but they will prove the worthy trustees which Sir W. Turner wishes them to be.

We come now to the remark that the duty of carrying out the details of the Dentists Act had been "cast on the Medical Council." We need only refer to the printed reports of the Council to see that they willingly accepted the duties now devolved upon them, and that in open Council they debated clauses of the Dentists Act and made recommendations thereon, and there are those who think that some of the trouble incident to the working of the Act has resulted from these very modifications.

It is not to be expected that each and every member should take a special interest in this portion of their work, and it has consequently happened that undue influence has been exercised by some few whose voices have been too frequently heard, and who have been supposed to understand the business. We clearly hail as a sign of better times the fact that such men as Sir W. Turner, Dr. Matthews Duncan, and Mr. Marshall are looking into the matter.

APPOINTMENTS.

HERBERT A. LAWRENCE, L.D.S.I., has been appointed Dental Surgeon to the Ealing Cottage Hospital.

MR. J. STEWART BURWARD has been promoted to the Senior Dental Staff of the Edinburgh Dental Hospital, vice E. A. Cormack, resigned.

ASSOCIATION INTELLIGENCE.

Meeting of the Representative Board.

THE above meeting was held at Leicester Square, March 5th. Present—Vice-President, James S. TURNER, Esq., in the chair; Sir Edwin Saunders, Messrs. Storer Bennett, Cartwright, Coffin, Hutchinson, G. W. Parkinson, Weiss, Charters White, Woodhouse, and Canton (honorary secretary), of London. Messrs. C. H. Bromley, Southampton; Browne-Mason, Exeter; Brunton, Leeds; G. Cunningham, Cambridge; Dennant, Brighton; Waite, Liverpool.

The minutes of last meeting were read and confirmed. Letters regretting inability to attend were read, from Messrs. Humphrey, Mummery, Neal, R. Rogers, and Lee Rymer.

The Honorary Secretary stated that the Executive had been in communication with the authorities of the forthcoming Manchester and York Exhibitions, and trusted the result as to dental exhibits would be satisfactory.

Counsel's opinion on certain cases of infringement of the Dentists Act before the Business Committee, was read, and the matter was left in the hands of the Business Committee.

The report of the Journal and Finance Committee was received and adopted.

The resignations of Mr. Parkinson as treasurer, and Mr. Canton as honorary secretary, were received and accepted.

Mr. Canton was elected treasurer *pro tem.*, and Mr. Morton Smale was elected honorary secretary.

Mr. CANTON reported that he had heard from Mr. Brownlie, *re* the Annual Meeting, stating that the arrangements for the same were progressing satisfactorily.

It was decided to send copies of the Dentists' Register, and of the Chemists' and Druggists' Register, to all branch secretaries, with a view of helping them to ascertain the status of candidates for election as members.

A considerable amount of fresh business was brought under the notice of the Board by individual members of the same.

Messrs. J. T. Hughes, Altrincham; and T. W. F. Rowney, L.D.S.Eng., were elected members.

Mr. CANTON reported that the balance at the bank was now £659 15s. 1d. According to the balance sheet at the end of

the year it was £558 16s. 1d., the increase being due to the subscriptions paid for the current year.

Midland Counties Branch.

OCCASIONAL meeting held at the Young Men's Christian Association, Manchester, February 5th, 1887.

Present—A. M. Matthews, Bradford, President; S. Wormald, Stockport, Treasurer; Messrs. I. Renshaw, (Rochdale), J. L. F. Pike (Sheffield), W. E. Harding (Shrewsbury), T. Murphy (Bolton), E. H. Williams, W. Dykes, G. Frost, L. Dreshfield (Manchester), J. H. Jones (Sale), G. H. Lodge (Rotherham), J. Harrison, F. Harrison (Sheffield), W. Lee (Northwich), T. Wormald (Oldham), W. Shillinglaw (Birkenhead), W. H. Jewitt, R. Edwards, and W. H. Waite (Liverpool).

A paper was read by Mr. JONES (Sale) "On Cocaine and its Uses in Dentistry." A very interesting discussion followed, in which several of those present took part, there being some difference of opinion as to the positive effects of cocaine in dental operations. We are sorry that our space does not permit of us giving the discussion in detail.

Dr. WAITE made some remarks upon gutta percha as a filling material, in which he described the composition and characteristics of the various gutta percha stoppings, and showed the distinctive uses of "low grade" and "medium grade," which are classed according to the relative temperatures at which they become plastic. Referring to the manipulation of gutta percha, he urged the necessity of gradually warming the pellets, and deprecated the practice of heating them over the flame of a spirit lamp. He pointed out the advisability of using warm instruments in connection with "medium grade," and spoke of the remarkable preservative influence of gutta percha over tooth structure, and its peculiar durability in large buccal cavities of molar teeth. He stated the results of analysis he had made of "Hill's," "Jacob's," "Flagg's," and "Premium," showing the proportions and constituents (approximately) of each kind. Some discussion followed, in which several members confirmed the statements relative to the saving qualities of gutta percha.

The proceedings terminated with the usual vote of thanks to the President.

The annual meeting of this Branch will be held on April 29th, at Chester, under the Presidency of F. BULLIN, Esq., J.P. Gentlemen who may be willing to read papers or give demonstrations at this meeting are invited to communicate with the Secretary as soon as convenient.

West of Scotland Branch.

THE usual monthly meeting of the West of Scotland Branch was held on Thursday, February 24th, in the Faculty Hall, St. Vincent Street, Glasgow, at 8 p.m. W. R. BROWNLIE, L.D.S.Eng., president, in the chair.

Mr. Matthew Dickie, 25, Westminster Terrace, Glasgow, was balloted for, and unanimously elected a member of the Branch.

Mr. W. BOWMAN MACLEOD, Edinburgh, described a case of bilateral necrosis of the upper jaw, which had been under his treatment from November, 1883. Last January the discharge was not totally in abeyance, and there was still some pain on the right side. A piece of bone had exfoliated from this side some time since.

He also described another case, involving the central, lateral, and canine of the left side of the upper jaw. The canine, on extraction, proved well developed, and the crown free from caries. Some five pits, the result of absorption, were found on the root, and the tooth was bathed in pus. The lateral was healthy, and the central only slightly affected. The alveolus was necrosed, and antiseptic tents were used with good effect.

Mr. Macleod showed other teeth with absorption of the roots, the pits in many being very deeply marked.

Some discussion followed, Mr. CUMMING and Mr. MELVILLE both describing cases in their own practice.

The PRESIDENT also mentioned an interesting case of a farmer, with extensive swelling and ultimate forming of sinuses, where four teeth were removed, together with a loose sequestrum of bone, the subsequent history being lost.

The last meeting of the season will be held on Thursday, March 24th, at the Faculty Hall, Glasgow, when it is proposed to discuss the arrangements necessary, consequent on the visit of the Association to Glasgow in August next.

THE BRITISH DENTAL ASSOCIATION.
Receipts and Expenses Account for the Year ended 31st December, 1886.

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6.

<i>General Account.</i>					
To Rent...	£	s. d.
" Secretary—Salary	25	0 0
" Stationery and Printing	50	0 0
" Auditing, Postages and Sundries	...	...	...	67	0 7
" Expenses of Annual Meeting ...	...	...	...	31	16 1
" Legal Expenses, v. Blake, Friederik and Arnemann	...	...	...	17	19 6
				123	0 2
				314	16 4
<i>Association Journal Account.</i>					
" Printing, &c.	...	...	...	463	7 7
" Salaries, &c.	...	...	...	153	7 9
				616	15 4
				£931	11 8

<i>General Account.</i>					
By Subscriptions	...	...	...	£	s. d.
Less amount credited to " Association Journal " account below	...	...	...	605	17 0
				201	19 0
				403	18 0
<i>Association Journal Account.</i>					
" Subscriptions as above	...	...	...	201	19 0
" Sale of copies of Journal	...	...	...	45	14 0
" Advertisements	...	...	...	195	16 5
				443	9 5
" Deficit carried down	84	4 3
				£931	11 8

THE BRITISH DENTAL ASSOCIATION.

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Balance Sheet.

1st January, 1887.

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To Balance from last Account	..	843	0	4
Less Deficit brought down	84	4
			3	
				758 16 1
				£758 16 1

70 and 71, Bishopsgate Street Within, London, E.C.

Examined and compared with the Books and Vouchers, and found correct,

23rd February, 1887.

RAIT & KEARTON (Chartered Accountants) Auditors.

Central Counties' Branch.

THE next meeting of the Central Counties' Branch will be held at 71, Newhall Street, Birmingham, on Thursday, March 24th, at 6 p.m. Papers have been promised by Mr. Orrock, on "the Preservation of Children's Teeth," and Mr. W. Palethorpe on "Gold and Amalgams as Tooth Fillings."

Testimonial to Dr. W. H. Waite, Liverpool,

HON. SEC. MIDLAND BRANCH OF THE B.D.A.

Subscription List.

Sir Edwin Saunders, London	...	...	...	£10	10	0
Henry Campion, Esq., Manchester	...	...	...	10	10	0
Fred Bullin, Esq., J.P., Chester	...	...	...	10	10	0
A. Woodhouse, Esq., London	...	...	...	10	10	0
Sir John Tomes, London	...	...	...	5	5	0
Thos. A. Rogers, Esq., London	...	...	...	5	5	0
W. Bowman Macleod, Esq., Edinburgh	...	...	...	5	5	0
Richard Rogers, Esq., Cheltenham	...	...	...	5	5	0
Jas. Smith Turner, Esq., London	...	...	...	5	5	0
W. H. Woodhouse, Esq., London	...	...	...	5	5	0
H. C. Quinby, Esq., Liverpool	...	...	...	5	5	0
J. Greenfield, Esq., London	...	...	...	5	5	0
F. Canton, Esq., London	...	...	...	3	3	0
Morton Smale, Esq., London	...	...	...	3	3	0
G. C. Mac Adam, Esq., Hereford	...	...	...	3	3	0
A. M. Matthews, Esq., Bradford	...	...	...	2	2	0
Sidney Wormald, Esq., Stockport	...	...	...	2	2	0
I. Renshaw, Esq., Rochdale	...	...	...	2	2	0
Thos. Murphy, Esq., Bolton	...	...	...	2	2	0
D. A. Wormald, Esq., Bury	...	...	...	2	2	0
E. H. Williams, Esq., Manchester	...	...	...	2	2	0
G. Brunton, Esq., Leeds	...	...	...	2	2	0
W. E. Harding, Esq., Shrewsbury	...	...	...	2	2	0
Roff King, Esq., Shrewsbury	...	...	...	2	2	0
J. L. F. Pike, Esq., Sheffield	...	...	...	2	2	0
T. Wormald, Esq., Oldham	...	...	...	2	2	0
T. M. Kelly, Esq., Manchester	...	...	...	2	2	0
W. H. Jewitt, Esq., Liverpool	...	...	...	2	2	0
Henry Planck, Esq., Manchester	...	...	...	2	2	0
Henry Sewill, Esq., London	...	...	...	2	2	0
Dr. R. Theodore Stack, Dublin	...	...	...	2	2	0
L.T. Browne-Mason, Esq., Exeter	...	...	...	2	2	0

W. Woodburn, Esq., Glasgow	...	...	£2 2 0
John Dennant, Esq., Brighton	...	...	2 2 0
Walter Campbell, Esq., Dundee	...	...	2 2 0
J. Howard Mummery, Esq., London	...	...	2 2 0
W. Williamson, Esq., Aberdeen	...	...	2 2 0
J. R. Brownlie, Esq., Glasgow	...	...	2 2 0
S. Cartwright, Esq., London	...	...	2 2 0
Bradford and District Dental Association, Bradford	...	...	2 2 0
J. Fenn Cole, Esq., Ipswich	...	...	2 2 0
Dr. Martin, Portsmouth	...	...	2 2 0
R. H. Woodhouse, Esq., London	...	...	2 2 0
Clifford Gibbons, Esq., Brighton	...	...	2 2 0
S. J. Hutchinson, Esq., London	...	...	2 2 0
W. H. Woodruff, Esq., London	...	...	2 2 0
J. H. Carter & Sons, Leeds...	...	...	2 2 0
F. Ewbank, Esq., London...	...	...	2 2 0
C. J. Peacock, Esq., West Brighton...	...	...	2 2 0
Augustus Winterbottom, Esq., London	...	...	2 2 0
R. Hepburn, Esq., London	...	...	2 2 0
D. Hepburn, Esq., London	...	...	2 2 0
T. Underwood, Esq., London	...	...	2 2 0
H. P. Fernald, Esq., Cheltenham	...	...	2 2 0
G. Cunningham, Esq., Cambridge	...	...	1 1 0
C. H. Bromley, Esq., Southampton	...	...	1 1 0
Henry Blandy, Esq., Nottingham	...	...	1 1 0
R. Wentworth White, Esq., Norwich	...	...	1 1 0
T. Gaddes, Esq., London	...	...	1 1 0
Leonard Matheson, Esq., London	...	...	1 1 0
H. B. Mason, Esq., Exeter	...	...	1 1 0
S. Lee Rymer, Esq., Croydon	...	...	1 1 0
Breward Neale, Esq., Birmingham	...	...	1 1 0
Charles Sims, Esq., Birmingham	...	...	1 1 0
John O'Duffy, Esq., Dublin	...	...	1 1 6
Wm. Dykes, Esq., Manchester	...	...	1 1 0
G. Champion, Esq., Manchester	...	...	1 1 0
Wm. Broughton, Esq., Manchester	...	...	1 1 0
G. Frost, Esq. (Pendleton), Manchester	...	...	1 1 0
H. C. Smale, Esq., Manchester	...	...	1 1 0
C. Farnsworth, Esq., Manchester	...	...	1 1 0
F. A. Huet, Esq., Manchester	...	...	1 1 0
A Friend	...	...	1 1 0
Geo. Payne, Esq.	...	...	1 1 0
J. H. Jones, Esq., Ashton-on-Mersey	...	...	1 1 0
A. Hill, Esq., London	...	...	1 1 0
J. B. Longhurst, Esq., London	...	...	1 1 0
Sidney Longhurst, Esq., London	...	...	1 1 0

W. H. Nichol, Esq., Leeds	...	...	...	£1	1	0
J. S. Crapper, Esq., Hanley	...	...	...	1	1	0
Warwick Hele, Esq., Carlisle	...	...	...	1	1	0
Hugh Dewes, Esq., London	...	...	...	1	1	0
J. H. Bailey, Esq., Guildford	...	...	...	1	1	0
A. Cronin, Esq., London	...	...	...	1	1	0
W. H. Griffiths, Esq., Newport	...	...	...	1	1	0
A. W. W. Baker, Esq., Dublin	...	...	...	1	1	0
W. St. John Elliott, Esq., London	...	...	...	1	1	0
R. J. Hargreaves, Esq., Bacup	...	...	...	1	1	0
Cornelius Robbins, Esq., London	...	...	...	1	1	0
H. W. Tracey, Esq., Bury St. Edmunds	...	...	...	1	1	0
John A. Biggs, Esq., Glasgow	...	...	...	1	1	0
John A. Gartley, Esq., London	...	...	...	1	1	0
John Ackery, Esq., London	...	...	...	1	1	0
G. B. Pearman, Esq., Torquay	...	...	...	1	1	0
A. S. Underwood, Esq., London	...	...	...	1	1	0
Jonathan Hooton, Esq., Manchester	...	...	...	1	0	0
Felix Weiss, Esq., London	...	...	...	0	10	6
W. Simms, Esq., Manchester	...	...	...	0	10	6
W. Shillinglaw, Birkenhead	...	...	...	0	10	6
Wm. Lee, Esq., Castle Northwich	...	...	...	0	10	6
J. O. Butcher, Esq., London	...	...	...	0	10	6
W. B. Harcourt, Esq., Norwich	...	...	...	0	10	6

ORIGINAL COMMUNICATIONS.

Palladium and Some of its Uses and Peculiarities.*

By W. A. HUNT, L.R.C.P.Lond., M.R.C.S.Eng., &c.

MR. PRESIDENT AND GENTLEMEN,—Among a crowd of substances used for saving teeth by plugging none answer all requirements. Gold is placed at the head of the list by us all I suppose, yet we must often—to ourselves—confess many a disappointment with the royal metal. A man who has not had many failures with gold must be either a very exceptional individual, or a man of very small experience in his profession. For my own part I see that great numbers of teeth are almost, nay altogether, lost from men bowing down to the *auri sacra fames*, as Virgil says, “the cursed thirst for gold.” I allude more particularly to difficult distal cavities. It is melancholy to see how much

* Read at the Annual Meeting of the Western Counties Branch, 1886.

strong healthy enamel and dentine have often been ruthlessly cut away "to well open up the cavity," as it is facetiously called. Prune away everything unreliable by all means, but do not destroy anything that is good, unless for very strong reasons indeed. I think careful, laborious excavation and plastic fillings for most distal cavities serve your patients' interests better than the remorseless "opening up," which is needed for gold plugging in such places. Your patients' interests are yours, remember, and if a man has not learned this much, Time will assuredly teach him. I think one may often form a correct judgment as to what line of treatment to adopt by, for a moment, mentally changing places with one's patient, and then inquiring of oneself, "Now with all my knowledge and experience of these matters how should I wish this particular tooth to be treated were it my own tooth?" The answer will come. Then let the operator loyally carry out that answer to the best of his ability. I think this method of forming your judgment will explain what I have so often seen, viz., that when dentists themselves go to have such cavities treated, they say to the operator, "I must put myself in your hands; but I shall be quite satisfied with a Sullivan. Indeed I hope you will use it." I am speaking now of some of the best operators in this and other countries; because if my remarks are just with regard to the best men, with how much greater force can I apply them in speaking of less skilful operators? I think you will agree with me when I say that of all the amalgams we use, Sullivan's perhaps is the most useful from a salvation point of view; but that its chief drawbacks are, (1) the great disfigurement of the tooth by the dark staining that often takes place, and (2) the remarkable way in which it dissolves very very slowly, as a rule, in the fluids of the mouth—although in some rare cases with wonderful rapidity. Now my purpose is to bring under your notice Palladium, a metal possessing many distinct advantages when formed into an amalgam with mercury over every other amalgam, and except in one respect, namely, that of colour, over gold itself. I have reason for saying that this metal, although much prized by a few who know how to work it, is neglected by the great majority, owing to the difficulty of manipulating, the absence of any information about it, its supposed great cost, and, lastly, an ignorance of its very valuable properties. I am not aware of its use outside this country—certainly in America they seem ignorant of it—but as a proof of its value I may men-

tion that a noted dentist in London has paid for palladium from £200 to £300 at a time for his own use. Palladium, with rhodium, was discovered by Dr. Wollaston in 1803. Both are rare metals, and are found associated with osmium, iridium, and ruthenium in platina ore. So far as I am aware, the refining of palladium is a monopoly in the hands of Johnson and Matthey, of Hatton Garden, and the method they use is one that was first adopted by Johnson many years ago. As used by dentists it is a precipitate of pure palladium in the form of a dark impalpable powder, a sample of which I show you. Its cost is from 140s. to 147s. an ounce—apparently much more costly than gold—but whereas the specific gravity of gold is 19.5, that of palladium is but 11.3, so that 1 oz. of palladium nearly equals 2 ozs. of gold. To this must be added the mercury, of which palladium takes up an enormous quantity. Thus a palladium plug at 147s. an ounce is really less than half the cost of a gold plug of the same size.

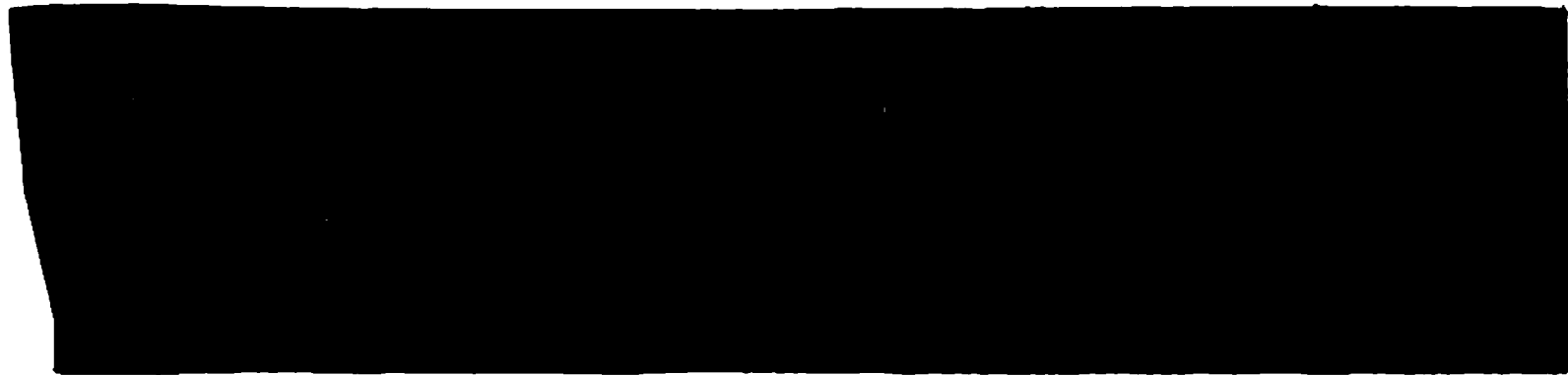
Unfortunately, waste palladium—*i.e.*, that has undergone amalgamation—is worth but 15s. an ounce; but the matter of cost is a very minor consideration. I have, however, thought it worth explaining to you. There are two varieties—the black and the grey. The former is simply a variety that has undergone a slight oxidation. It is often difficult to mix with mercury, and I shall not, therefore, further describe it. The grey variety only should be used. Now, the grey will sometimes mix easily, sometimes with great difficulty; sometimes—especially after any portion has been deprived of its mercury by squeezing, and is allowed to set at rest—there is a sudden evolution of heat as it hardens, and the mass explodes with some noise. Now, by adopting the following plan, all these difficulties are certainly avoided. Put as much as you judge needed into a small platina capsule, like the one I hand round; heat carefully over a spirit-lamp, breaking up all lumps until every particle has been heated, and the powder assumes a floury condition. You must not approach a low, red heat, or the powder will turn to a purple colour—the result of superficial oxidation, and it will then be impossible to get mercury to mix with it. As you heat it carefully, acid fumes are given off, and if any steel instrument is used it will become very rusty. The fumes are those of free sulphuric acid, a remainder from the work of precipitation, which the refiners tell me it is absolutely needful to have and leave in the process. However, in a minute or so all this is dissipated, and you can then turn the powder into an agate mortar; add

nearly its own bulk of pure mercury, and then rapidly mix with the agate pestle. You will then quickly have a fine, soft paste, with a marvellous plasticity, that can be moulded into the finest markings, in the walls of your cavity. Of course, everything must be prepared—the dam on, and every little detail seen to—before mixing. A portion may then be rubbed with a blunt plugger—a convenient pattern for which I here exhibit—into the most intimate connection with the cavity walls, and then the plug completed. You must finish the plugging within two or three minutes of the mixing, as the amalgam will now be nearly set; the contouring and polishing may then be proceeded with at your leisure. A slight expansion occurs as setting takes place, and thus you get a tight waterproof plug, which, so far as long experience goes, is the most durable known. It bears wear and tear perfectly, and is never acted on by saliva. Another among many advantages is that if you have a tooth diseased a good deal near its neck, and a plate dependent on the tooth grasping it by a gold band, you may repair this tooth, and perfectly contour it with palladium, and in five minutes or so you can put back the plate, and the mercury of the plug will not in any way injure your gold band. If you proceed as I suggest, your palladium will always work easily; you will have none of the difficulties commonly described in the manipulation of this singular metal. If the cavity walls are thick, you will never have any discolouration visible; if they are thin you sometimes will, but very rarely. If they are thin enough to be partly transparent, the plug will always show through, just as any other plug will; but in all cases the exposed surface of the plug will turn a dark, purply black, and the operator must in each case decide whether such an objection will outweigh the advantages of palladium in all other respects. In conclusion, I here show you some pure metal in sheet, and also in its precipitated form, and an agate pestle and mortar of a convenient size for mixing. Mr. Hunt then intimated his readiness to answer any questions bearing on the subject of his paper.

The effect of Nitrous Oxide Gas on the Pulse.

By DANIEL MOWAT, M.B., and C.M.Edin.

WHILE attending "the Post Graduate Course" at Edinburgh, 1886, I, through the kindness of the dental surgeons of the Edinburgh Dental Hospital, have been enabled to take the following



Application of
forceps.

Extraction of
tooth.

After extraction of
tooth.



Pulse beginning to regain its normal state. All these tracings were taken from the same individual and all at the same pressure.

PULSE TRACINGS FROM A FEMALE ÆT. FIFTEEN YEARS.



Styrous oxide



Inhalation commenced. Tension falls and the number of pulsations is increased.



one tracing taken immediately after the other in the order in which they are pl



of tooth and cessation of inhalation. The pulse is gradually returning to its natural cond
(2½ oz. pressure).

These tracings show that the tension of the pulse begins to diminish as soon as inhalation is commenced.

The explanation is probably the following: the now oxygenated blood charged with nitrous oxide passes through the pulmonary veins to the left side of the heart, stimulates its walls, and thus increases its contractions. This accounts for the increase in the number of pulsations. The fall of tension is probably due to the heart beating more quickly than usual, and so it sends a smaller quantity of blood through the arteries at each systole, and partly also to capillary dilatation. It will be apparent to all that a heart which beats at the rate of seventy beats per minute will send double the quantity of blood through the arteries, that it would send if it were beating at the rate of one hundred and forty beats per minute.

As the dental surgeons have given me permission to take as many tracings as I wish, I shall take advantage of their kindness when I am next in Edinburgh.

Treatment of Sensitive Dentine and the Dental Pulp.*

BY W. DOUGAN, L.D.S.I.

HYPERSENSITIVE dentine is one of the most unpleasant concomitants of dental caries, and one that, perhaps more than any other, taxes the ingenuity of the operator to the utmost, in his endeavours to persuade his patient to bear the pain that attends the preparation of a cavity to receive the filling. So unsatisfactory have been most attempts at obtunding the sensitiveness of dentine, that it is commonly asserted that there is no remedy for this condition, and that the only treatment available is very quick cutting with sharp instruments. Still, although we cannot over-estimate the value of sharp instruments, this alone will hardly satisfy the average patient. Another large class of operators content themselves with making applications of carbolic acid, or creosote, but so far as my experience goes, these remedies are worse than useless, as the dentine usually appears to become still more sensitive, and I cannot recollect an instance where their application has been beneficial.

Another class of operators (a very small one) obtund the

* Read before the Manchester Odontological Society, on January 11, 1887.

dentine by making an application of arsenious acid, which is usually allowed to remain in contact with the dentine for a few hours only, and those who use this caustic maintain that the effect is only superficial when used as they use it. From this supposition I must express my entire dissent, as I believe the inevitable consequence of placing arsenic in a cavity of a tooth is eventually to destroy the pulp, though this untoward sequela will not always supervene until a period of time varying from one to twelve months has elapsed.

Many operators employ chloride of zinc as an obtundent with a certain amount of success, and this agent may produce a very considerable effect in obtunding sensitive dentine.

Dentine owes its sensitiveness to the contents of the dentinal tubes, which transmit sensations to the pulp, and the treatment I wish to recommend is based upon a systematic method of drying up and coagulating the contents of the tubes. The rubber dam having been adjusted, dry the cavity, saturate it with absolute alcohol, dry with a hot-air syringe, saturate again with alcohol, and dry again as before. There will now usually be no difficulty in removing the softened portions of decayed dentine, and they are usually the parts in which sensitiveness is most pronounced. Dentine that before this treatment is so sensitive that even wiping it with wool causes pain, will almost always be now in such a condition that its removal is comparatively painless. However, should it still be sensitive, a further course of drying must be made, and plenty of time allowed. When the decalcified dentine has been removed, the firmer portions underneath will not generally be very sensitive, but should they be so, chloride of zinc, or chloride of calcium, reduced by deliquescence, should be allowed to remain in the cavity until the pain produced by it has passed away, when the cavity should be again saturated with alcohol, and dried in the manner already described. This process of drying intensifies the effect of the zinc chloride, and causes it to penetrate to a much greater depth. As the effect of this caustic is comparatively superficial, it will sometimes be necessary to make a second, or even a third application, if much cutting or shaping of the cavity is required. But in by far the majority of cases one application of the caustic will suffice. Now, this treatment is not altogether perfect, because the application of the remedies themselves produces some little pain, but it has the advantage that it is not attended with the inconveniences or dangers

of general anæsthesia. In very deep cavities it is not wise to apply chloride of zinc, but in such cases, fortunately, there is usually but little sensitiveness, except directly over the pulp. It is mainly in small and shallow cavities that the removal of hyper-sensitive dentine proves troublesome.

We will now briefly consider some of the views advanced respecting the capping of exposed pulps, a subject upon which opinions are more divided perhaps than upon any other, some operators claiming to have almost universal success in treating and saving alive all pulps however long exposed ; while other operators consider all attempts at saving pulps even recently exposed as unreliable, and make a practice of destroying them all.

Exposed pulps may be divided conveniently into two classes : first, those which have been accidentally exposed, and which have caused no pain and are quite healthy ; secondly, those which have been exposed by disease, and have given rise to more or less disturbance. With pulps of the first class I consider it a comparatively easy matter to save them alive, but with the second it must necessarily always be doubtful, as it is impossible to be sure of the condition of the pulp, and very little reliance can be placed upon the statements of patients, who are too prone to exaggerate their sensations. Exposures of the first class may be conveniently treated by a preliminary syringing with warm water, drying, blanching of the exposed pulp with carbolic acid, and finally covering the exposure with oxysulphate of zinc. To secure good results it is necessary that the pulp be covered with an unyielding non-irritant material, that can be applied without any pressure. It is a moot point whether or not it is wise to apply so powerful a caustic as carbolic acid to a pulp that we wish to preserve alive. In my own experience pulps so treated have proved the most satisfactory. It must not be assumed because a pulp has given very little trouble after capping that it is still alive and healthy. Arsenious acid is the most effectual agent for the destruction of the pulp, and also the one most commonly used, and it is usually recommended to apply about the one-fiftieth part of a grain, but as a matter of fact it is altogether immaterial what quantity is employed, provided always that none is allowed to get upon the gums or to be swallowed ; but inasmuch as the most minute quantity will destroy a pulp as effectually as the largest, and also as there will necessarily be less chance of a minute quantity gaining access to the

gums, it is always better to use a small amount. It is always desirable to apply the arsenic directly to the pulp, because its effect will then be more rapid and complete and less painful. After the arsenic has been in contact with the dentine over the pulp for about two hours it will almost always be possible to then expose the pulp completely, and a fresh application of arsenic may then be made, and this second application will scarcely ever cause pain.

It is usually recommended to remove the arsenical application within twenty-four hours, but it is quite immaterial how long it is left in the tooth, and in my opinion it is better to leave it in the tooth for three weeks or a month undisturbed, as its presence will tend to prevent decomposition, and also because it is rarely possible to remove the pulp entirely without pain to the patient until three weeks or more after applying the caustic. It is quite true that in some cases the pulp may be found quite devoid of sensation to the very apex of the root in a few hours after applying the arsenic, but this result can only be obtained when the caustic has been applied to a healthy pulp, and this is just the case where it is generally considered unnecessary and undesirable to resort to its use. It will be found that just in proportion as the pulp is full of vitality so will it usually be easy to devitalize it, and arsenic or any other caustic will be found to produce little or no effect upon a dying or partially decomposed pulp.

When the pulp has been deprived of sensation by the use of arsenious acid, it will, of course, be necessary to remove it to the apex of the root, and difficulty will sometimes be experienced on account of the pulp (although slowly decomposing) still remaining obstinately sensitive towards the apex of the root. In these cases it is the custom of many practitioners to make further application of arsenic, carbolic acid, or the like. This to me appears to be an extremely bad practice, and I myself much prefer rigorously to exclude such agents from the cavity, and instead, wait until the tissues have sloughed away, and then remove the remains with a nerve bristle and syringe.

NATIONAL DENTAL HOSPITAL.—The second smoking concert of the season, under the auspices of the Student Society of the above institution, took place on Wednesday, February 16th, at the St. James's Hall. Above three hundred gentlemen attended, and an amusing programme was gone through, under the chairmanship of Mr. Henry Weiss.

HOSPITAL REPORTS AND CASES IN PRACTICE.

Two Cases of Alveolar Hæmorrhage.

BY F. NEWLAND PEDLEY, F.R.C.S., L.D.S.,

ASSISTANT DENTAL SURGEON TO GUY'S HOSPITAL.

SEVERE cases of hæmorrhage, after tooth extraction, are very liable to find their way into the hands of dental surgeons connected with hospitals, and at my advice two "bleeders" were recently taken into the wards of Guy's Hospital and treated as in-patients.

The first patient was a man who had displayed a marked tendency to bleed on three previous occasions after the extraction of a tooth at the hospital. Two or three years had elapsed since he last made his appearance to have a tooth removed, but I had a vivid recollection of his case for he had bled, at times profusely, during a period of ten days or more, and Mr. Moon and I had failed in numerous attempts to arrest the bleeding by the usual treatment of styptics and plugging. The hæmorrhage was eventually controlled, but not until the man had become reduced to a pitiable condition of anæmia, justifying grave apprehensions for his safety. On the present occasion he again required to have a tooth removed, and both patient and dentist confidently expected a repetition of his previous difficulties. By way of preparatory treatment the man was given a mixture of perchloride of iron and sulphate of magnesia, which he was directed to take three times a day for a week. At the end of that time he returned to the hospital, and I arranged that he should be admitted as an in-patient for a few days. He was put to bed and propped up with pillows into an almost sitting posture, then I extracted his tooth, and we immediately plugged the socket with cotton wool and tannic acid, applying pressure by a compress of lint and a bandage passed beneath the lower jaw and tied over the vertex. The patient was fed on liquid food. A little bright oozing of blood occurred next day and I thought the hæmorrhage was now going to commence, but such was not the case, and at the end of two or three days he was discharged well.

The second case was a man who is in the wards of Guy's Hospital now. On February 1st he had an upper tooth removed by a chemist. He asserts that he warned the chemist that he was a bleeder, but the intimation was disregarded. Hæmorrhage took

place at intervals for a week, and on the seventh day he came to Guy's Hospital where the socket was plugged. Two days afterwards (ninth day) I saw the man for the first time, and on my recommendation he was admitted as an in-patient, under the care of Mr. Davies-Colley. The patient's history was pretty typical. His grandfather and brother were bleeders. From infancy he had been subject to excessive hæmorrhage from slight causes. Troublesome bleeding from the gum followed even the biting of a crust of bread. The socket was plugged, pressure applied, iron and magnesia sulphate given internally, with a diet of milk and beef tea. I saw him in the ward on February 15th, and the bleeding, which had recurred at intervals in diminished quantity, had finally ceased.

I think these cases offer some evidence that "bleeders" are fit subjects for treatment in the wards of a hospital, where aid is at hand to cope with bleeding at its onset; where the diet can be regulated, alcohol withheld, and perfect rest insured.

Cocaine.

IN a paper read before the Manchester Odontological Society by Mr. Sims, on the subject of cocaine, some very interesting facts were recorded. The tabulated results of eighty cases of cocaine used hypodermically as an anæsthetic during extraction. The results were as follows :—

No appreciable pain or absolutely painless	...	...	48
Pain greatly diminished	...	...	29
Without apparent effect	...	...	3

The dose varied from $\frac{1}{2}$ to $3\frac{1}{2}$ grs., tepid water was used. The effect was less in cases of much inflammation. The injection of $3\frac{1}{2}$ grs. had not produced any after effects, whereas in three other cases 1 gr., and in one case $\frac{1}{2}$ gr. sufficed to do so. The author had found coffee and nitrite of amyl of service as restoratives in unfavourable cases. The ill effects were more marked in patients of a nervous temperament (owing perhaps to the deficiency of solid matter in the blood). The author referred to the other uses of cocaine in dental surgery, such as in treating pulps, model taking in sensitive cases, where the tendency to retching is such an obstacle to success. The paper is a good summary of the subject, and we greatly regret that we are unable to place it before our readers in its entirety, but owing to the increased demand on our space, we must content ourselves with this brief notice.

A List of Cases of Anaesthesia obtained by Injecting a mixed Solution of Cocaine and Carbolic Acid.

BY GEORGE VIAU. (Continued from page 85.)

No.	Date of Operation.	Name.	Age	Temperament.	Diagnosis.	Number of Extractions.	Pain during Operation.	After trouble.	Observations.
1	Sept. 29, 1886	Mdlle. Mangeot (M.) 16½	16½	Nervous ...	First upper bicuspid left, periostitis, pain for last 48 hours	1 root	None	None	Slight palpitation attributed to the nervous state produced by her sufferings for the last 48 hours
2	Id. ...	M. Margerit ...	40	Nervous, anæmic...	Lower first bicuspid left, extraction necessitated great force	1 root	None	None	Seen the following day. Has had no trouble
3	Id. ...	Mdlle. Busson ...	23	Chlorosis...	Upper first bicuspid left, acute periostitis	1 root	None	None	
4	Id. ...	Mdlle. Pitolas ..	23	Good constitution	Lower first molar right, commencement of swelling	2 roots	None	None	Seen the following day. No trouble. Is enchanted
5	Id. ...	Mdlle. Vaucheret ...	10½	Nervous ...	Lower first molar left, crown gone	2 roots	None	None	A very difficult case. Remarkable success
6	Sept. 30, 1886	M. Margerit ...	40	Nervous, anæmic...	Second upper molar left, periostitis	2 buccal roots	None	None	Second time of operating (<i>vide</i> No. 2)
7	Id. ...	Mdlle. Mangeot (J.) 12	12	Progressive anæmia	First upper molar left, alveolar abscess	3 roots	None	None	
8	Id. ...	Mdlle. Mangeot (M.) 16½	16½	Nervous ...	Lower first molar left, fistulous abscess	2 roots	None	None	Second time of operating (<i>vide</i> No. 1). This time neither palpita-

10	Id.	...	Mme. L.	...	145	Lymphatic, fair, thin	Upper second molar right, extensive caries at neck	... 3 roots	None	...	None	Slight uneasiness lasting 5 minutes, patient stated she experienced it after every previous extraction
11	Id.	...	Mdlle. Gunebert	...	25	Good constitution	Upper first bicuspid left, chronic alveolar abscess	1 root bifurcated	None	...	None	
12	Oct. 1, 1886	...	M. Oury	...	17	Good constitution	Lower first molar left, periodontal cyst	2 roots	None	...	None	
13	Id.	...	Mme. L.	...	40	Lymphatic, rendered anæmic by a long and painful illness	Lower first molar left, alveolar abscess, commencement of a swelling	2 roots separated	None	...	None	This patient has morphia, nevertheless the success was astounding
14	Id.	...	Mme. C.	...	24	Nervous, subject to fainting fits	General periostitis on left side, the second upper bicuspid seemed the starting point	1 root	None	...	None	A cyst was found at the extremity of the root
15	Id.	...	M. L.	...	60	Good constitution	Upper lateral right, crown accidentally fractured	1 root	None	...	None	
16	Oct. 2, 1886	...	Mme. L. M.	...	32	A nervous and pusillanimous patient	Upper second bicuspid left, alveolar abscess	1 root	None	...	None	The patient screamed during the extraction, but afterwards declared she felt no pain locally, but only the traction on the superior maxilla
17	Id.	...	Mdlle. P.	...	20	Very nervous and apprehensive. The operation had been several times postponed	Chronic fistulous abscess caused by root of upper first bicuspid left	1 root bifurcated	None	...	None	A nervous crisis at the moment of the first injection. The operation finished patient grew calmer, and declared she had felt no pain
18	Oct. 3, 1886	...	Mme. C.	...	28	Good constitution, but extremely nervous	Upper second bicuspid left, chronic alveolar fistula	1 root	None	...	None	Patient suffered no pain, so permitted the extraction of a lower left wisdom stump at the same sitting, in spite of her fears on arrival
19	Oct. 4, 1886	...	Mdlle. Gunebert	...	25	Good constitution	Upper first bicuspid right, acute periostitis	1 root bifurcated	None	...	None	Second time of operating (<i>vide</i> No. 11)
20	Id.	...	Mme. Z.	...	27	Nervous, very pusillanimous	Upper second bicuspid left, caries in 4th degree, mesial side of crown absent, periostitis and chronic abscess	1 root	None	...	None	The patient extremely frightened, had palpitations before the extraction which ceased after

A List of Cases of Anæsthesia obtained by injecting a mixed Solution of Cocaine and Carbolic Acid.

BY GEORGE VIAU. (Continued from page 85.)

No.	Date of Operation.		No. Date of Operation.	Number of Extractions.	Pain during Operation.	After trouble.	Observations.
1	Sept. 29, 1886	Mdlle. Mangeot (M.)	1	1 root	None	None	Slight palpitation attributed to the nervous state produced by her sufferings for the last 48 hours
2	Id.	M. Margerit	4	1 root	None	None	Seen the following day. Has had no trouble
3	Id.	Mdlle. Busson	23	1 root	None	None	
4	Id.	Mdlle. Pitohas	23	2 roots	None	None	Seen the following day. No trouble. Is enchanted
5	Id.	Mdlle. Vaucheret	104	2 roots	None	None	A very difficult case. Remarkable success
6	Sept. 30, 1886	M. Margerit	40	2 buccal roots	None	None	Second time of operating (<i>vide</i> No. 2)
7	Id.	Mdlle. Mangeot (J.)	12	3 roots	None	None	
8	Id.	Mdlle. Mangeot (M.)	164	2 roots	None	None	Second time of operating (<i>vide</i> No. 1). This time neither palpitations nor uneasiness
9	Id.	M. Z.	134	2 roots	None	None	In a space of 20 minutes this patient was twice anaesthetized, <i>i.e.</i> , he absorbed 10 centigr. of cocaine in 1 gramme of carbolic solution, without any ill effects following the operations

10	Id.	...	Mme. L.	...	45	Lymphatic, fair, thin	Upper second molar right, extensive caries at neck	...	None	...	None	Slight uneasiness lasting 5 minutes, patient stated she experienced it after every previous extraction
11	Id.	...	Mdlle. Gunebert	...	25	Good constitution	Upper first bicuspid left, chronic alveolar abscess	1 root bifurcated	None	...	None	
12	Oct. 1, 1886	...	M. Oury	...	17	Good constitution	Lower first molar left, periodontal cyst	2 roots	None	...	None	
13	Id.	...	Mme. L.	...	40	Lymphatic, rendered anæmic by a long and painful illness	Lower first molar left, alveolar abscess, commencement of a swelling	2 roots separated	None	...	None	This patient has morphomania, nevertheless the success was astounding
14	Id.	...	Mme. C.	...	24	Nervous, subject to fainting fits	General periostitis on left side, the second upper bicuspid seemed the starting point	1 root	None	...	None	A cyst was found at the extremity of the root
15	Id.	...	M. L.	...	60	Good constitution	Upper lateral right, crown accidentally fractured	1 root	None	...	None	
16	Oct. 2, 1886	...	Mme. L. M.	...	32	A nervous and pusillanimous patient	Upper second bicuspid left, alveolar abscess	1 root	None	...	None	The patient screamed during the extraction, but afterwards declared she felt no pain locally, but only the traction on the superior maxilla
17	Id.	...	Mdlle. P.	...	20	Very nervous and apprehensive. The operation had been several times postponed	Chronic fistulous abscess caused by root of upper first bicuspid left	1 root bifurcated	None	...	None	A nervous crisis at the moment of the first injection. The operation finished patient grew calmer, and declared she had felt no pain
18	Oct. 3, 1886	...	Mme. C.	...	28	Good constitution, but extremely nervous	Upper second bicuspid left, chronic alveolar fistula	1 root	None	...	None	Patient suffered no pain, so permitted the extraction of a lower left wisdom stump at the same sitting, in spite of her fears on arrival
19	Oct. 4, 1886	...	Mdlle. Gunebert	...	25	Good constitution	Upper first bicuspid right, acute periostitis	1 root bifurcated	None	...	None	Second time of operating (<i>vide</i> No. 11)
20	Id.	...	Mme. Z.	...	27	Nervous, very pusillanimous	Upper second bicuspid left, caries in 4th degree, mesial side of crown absent, periostitis and chronic abscess	1 root	None	...	None	The patient extremely frightened, had palpitations before the extraction which ceased after

REPORTS OF SOCIETIES AND OTHER MEETINGS.

The Dental Hospital of London.

THE QUEEN'S JUBILEE DINNER.

IN celebration of the Queen's Jubilee, a dinner was given at the Hotel Metropole, on Thursday, the 10th inst., in connection with the Dental Hospital of London. Sir JAMES PAGET, Bart., F.R.S., presided, and the assemblage, numbering about 200, included Sir Risdon Bennett, Prof. Flower, Sir W. MacCormac, Sir Edwin Saunders, Dr. Bristowe, Mr. Christopher Heath, &c. We cannot refrain from mentioning that some familiar faces were absent. Illness of a serious nature prevented Sir John Tomes from attending, while Mr. James Parkinson, Mr. Thos. Underwood, and Mr. T. A. Rogers were all confined to their houses by doctor's orders.

The Royal toasts were proposed and received with the additional enthusiasm due to the occasion, and these having been loyally honoured, the CHAIRMAN proposed the "Army, Navy, and Auxiliary Forces," in suitable terms.

Mr. JAMES SMITH TURNER, in responding, said that with regard to the Navy they must all feel that they were indebted to it for the manner in which it protected our commerce, and presented to our dinner tables the sweet fruits of the earth. Further, he thought the Navy ought to claim their admiration, because, from all he had seen of other Navies, it had always seemed to him that the nearer a foreign sailor could approach the British Jack Tar, the better he was pleased with himself. He thought he might be regarded as half of a soldier, when he told them that he belonged to the London Scottish, but perhaps it was as well that a person who was almost a civilian should speak for the army and navy sometimes, because it was generally responded to by officers in one or other of the services, who were generally modest, and did not care to ask for anything for themselves. What the services wanted was fair play, and that was what neither the army or navy had had lately, for scoundrels had been supplying our army and navy with inefficient weapons of war. He trusted the press would continue to agitate, and to press upon every Government the necessity of providing means of offence and defence to our forces, which they know so well how to use.

The CHAIRMAN: I propose to you now, gentlemen, that we should drink the toast in relation to which we have met to-night

—"Prosperity to the Dental Hospital of London." We are not met to do more than indirectly promote that prosperity, for our purpose rather is, I am assured, to boast of the prosperity of the Hospital as it is at present, and to hope that it may long continue. Indeed, all those who have only seen the Hospital from time to time must have observed how well it prospers, and especially how great is the good it has done, and how that great good seems every year increasing. Looking at the hospital in the mere view of a charity, it is hard to estimate exactly the amount of good it does, for every year it increases. It is very difficult to estimate, for example, the amount of happiness which is given to the 40,000 people who have been relieved in one year. This total is still increasing, and has increased, for I believe that no fewer than 4,000 persons have been attended to within the last month. We cannot, I say, estimate the amount of happiness the hospital has given, and yet, perhaps, there are few hospitals with which each of us may feel more sympathy, having been at some time or other fellow-sufferers with those who are admitted to that institution. I suppose few of us have passed through life without knowing the happiness of good dental surgery. Imagine 40,000 persons suffering what we have suffered in times past, without any hope of remedy ; not relieved, as our own troubles have been, by the best skill of the time. Consider the comfort we have derived from our teeth this very evening. The great part of the enjoyment of the good dinner we have had has been due to them. On the morrow our comfort will be in some way determined by the way in which our teeth have been judiciously employed. Let each of us multiply the pleasure by 40,000, and we shall be able to estimate more nearly the benefits conferred by this Institution. But besides this, those who have studied at all know the influence of the teeth on the general health. I am not going to speak of dental or any other branch of pathology to-night. I mention it that we may be well aware how much health depends upon the teeth. They stand on the boundary between that which is dead and that which is to be living, and upon them depends the first, and often the principal, step of what shall be the progress in the change from the dead towards the living, by the process of digestion, and what the value of that living texture shall be which has begun to form. Here, again, the benefits conferred are utterly immeasurable. But, as I said, I am not going to speak of dental physiology, or I might have referred to their use in speech, or their use in im-

proving our personal appearance, which I would limit to the female sex, for I have my doubts whether personal appearance is a matter of much importance to any of our sex.

But I seem to be wandering far from the Dental Hospital. Let me say that the hospital is, so far as I know, the best institution of the kind which is to be found in Europe, if not in the whole world. It is the best in size and extent, the best furnished with apparatus, with chairs, or as we should say "beds" in other hospitals, the best fitted in all its arrangements, the most complete in the readiness with which this help is given, and I believe I may add, the most complete in the skill of those who exercise themselves in it. But I think the utility and value of the Dental Hospital is not half measured when we speak of it as an institution only for the remedy of the present existing troubles, it is besides this the home of the Dental School of London, and here it is an example of that which we have, happily for us, so largely existing in this country, the union of charity with science, a union of charity with education, a means by which charity multiplies itself a hundred fold in communicating its knowledge to all those who are competent to come and learn, and to extend its benefits to the population everywhere. And if I speak of the hospital as the best of its kind, so I may justly speak of the school, thoroughly furnished as it is with eminent teachers. It has a regular course of lectures, well attended by its eighty students, all of whom are taught the whole art of dentistry from the very beginning to the very end of it, learning there everything which they should know for the practice of their life, and learning from the best example. And I venture to say that there is another benefit conferred by teaching, namely, the teaching of the teachers themselves. I know well enough that in the course of educating others, none is so much educated as he who teaches. For any one to depend upon the judgment of the public for his authority in a profession such as ours is a total fallacy. It is usually fallacious, and very often totally misleading. The judgment that each of us should look for is the judgment of those who are competent to give an opinion, the judgment of those who, as students, criticise the whole process of treatment, and then judge of the results. But if we look at the mutual influence that the students have over the teacher, we cannot but see how great it is. Everyone is on his best metal in teaching, because he knows he is being observed by those who can judge. I venture to say also, that it may be hoped and even

expected, that out of this dental school with its scientific teaching, there will arise at least some few who will give themselves to the profounder study of all the teeth can teach. We should never forget—I include myself for the time, at least I should like to be included always among practitioners of dentistry in the country—that two of the finest monographs in our language are due to the scientific study of the teeth, John Hunter and Richard Owen. I well remember an observation of Sir Richard Owen, referring to this very question, that the greatest works in science in general had been done by the authors of monographs, that is, by such authors as will bring to the study of any single central subject a larger view of the whole of the sciences with which it is allied. This is within the range of the student of dentistry, if he will but see, and fairly look at, the immense range of subjects with which it is almost naturally associated. These include palæontology, natural history, pathology, the whole study of teeth in their relations in health and disease, and the applications of mechanical science in their treatment. Surely here is a field which all may be ambitious to cultivate. I have observed lately in the admirable address by Mr. Tomes, the difficulty experienced in the pursuit of science by the younger members of the dental profession, which does not, perhaps unhappily, affect the branch to which I belong. Mr. Tomes says as soon as they are fit for work they get so much work to do that they have not time to prepare for other things. Well there are two good exceptions, which I will quote, namely, Mr. Tomes' own father and himself. These have become Fellows of the Royal Society by their scientific pursuits, and I am happy to announce that Sir John Tomes, who is honoured by us all, is getting very much better. These are examples of men active in the business of their lives, and yet with time to devote to truly scientific pursuits, and I commend them to all who are young, not knowing (as yet they cannot) the intense happiness they will add to their lives, and what will seem more important to all, the immense influence which such scientific knowledge will have on the whole profession to which they may belong. There is but one more ground on which I propose this toast to you, namely, that this hospital has raised the profession of dentists into a profession honoured and legalised in the whole country. As we look back in this jubilee time for the last fifty years, one cannot but be happy in seeing what a complete contrast there is between the profession now and such as it was

at the beginning of the last half century. There were indeed very distinguished men in it at that time, distinguished surgeons who gave themselves to this special work, men whose descendants are still amongst us ; but these were not chained together as in one body—friends, and working as friends, but with no general influence on the profession—and although there were many able dentists, there was no distinction between them, and the village blacksmith or carpenter, or anyone who would give himself to the business, having usually failed in some other pursuit of life. There was no limit to the extraction of teeth and the fracture of the jaw that went on. This was intolerable, and some years ago the best members of the profession tried to legalize themselves into order. Tomes and Saunders were amongst these leaders, and they were joined by Lawrence, Arnott and Green, three of the strongest members of the College of Surgeons. They formed their plan of combining a dental school with a dental hospital, and then they set about obtaining complete and legal incorporation. From this time onwards you will rise, not only in utility, but in public estimation. All those students who are well educated will be admitted to the Register, all will be welcome, and all will be held as members in common with the great profession of medicine in England, and they will maintain amongst themselves the highest repute and the highest mutual honour that they can. These surely are grounds enough on which we may drink prosperity to the dental hospital, and looking back upon it with thanksgiving for the great prosperity it has enjoyed up to this time, thank God it has done far greater good than might be hoped from it. It will be obvious whose health I propose in relation to this toast—Sir Edwin Saunders. I might have proposed it for his professional distinction alone, for the long, honourable and useful life that he has led. I might have proposed it because of the token of Her Majesty's approval, which has been bestowed upon him. All these would have been reasons enough for it, but I propose it in connection with this toast because of his munificent and beneficent generosity to the Hospital. He has employed his well earned wealth to the highest and best purpose within the range of his own profession. He has thus rendered himself a model for us all, a model for all who will come after him. He has made us grateful, and he will make all grateful whoever shall see through this Dental Hospital anything that may succeed to it in this metropolis.

Sir E. SAUNDERS accepted the duty of replying on two grounds, first as senior trustee, and secondly as being mainly responsible for the removal of our institution from Soho to the present larger premises in Leicester Square, which took place exactly thirteen years ago that very day. He thanked the Chairman for the fairness and generous appreciation of what had been accomplished, with which he had stated the case. He then said, "The primary idea we had in founding the Dental Hospital was to supply the missing link in that golden chain of charitable institutions by means of which the highest skill and the most humane treatment are brought within the reach of the humblest and the most indigent, and offering an opportunity of acquiring technical knowledge and manual skill and dexterity for those who may desire to enter into the profession. The extent to which this is appreciated is shown by the renewed demand quite recently put forward for a further enlargement of the Hospital and School. However perfect the arrangement may be in the dental department in the large Hospitals they can never be made adequate to meet the requirements of dental surgery in its present advanced state. There is perhaps no part of our organization which is so intimately associated with pain throughout our life as our teeth. In infancy the earliest dawn of conscious existence is marred by a dim consciousness of suffering and disturbed health arising from their growth and evolution. The joyousness and elasticity of childhood are overshadowed by the discomforts of the change from the temporary to the adult set. Up to the middle of life they are a constant source of anxiety, if not of acute suffering. And in old age they do not leave us without giving us much trouble, and unfortunately the remedial treatment is, or rather was, not unattended with pain. A distinguished statesman, who is always ready to acknowledge his indebtedness to our art for much of his health and comfort of life, not to say of efficiency as an orator, speaking of the vividness of early impressions, said, 'One of my earliest recollections is the birth of a sister. On a certain day I and my elder brother were to be allowed to see the new arrival, and I distinctly remember that as we stood in silent wonder my brother, my senior by some four or five years, with a deep sigh suddenly exclaimed, "Poor little thing, she little thinks what she has before her with that horrid Dr. Steward." Dr. Steward being the family apothecary, accoucheur and dentist, and especially horrid in the latter capacity, 'for,' he added, 'at that

time, some seventy years ago, Liverpool did not possess a qualified dentist.' Well, sir, I think it is quite in accordance with the fitness of things that the first demonstration of the possibility of abolishing pain in surgical operations should have proceeded from our speciality. It should never be forgotten that that inestimable boon, anæsthesia, was given to a grateful world through the medium of a successful experiment in dental surgery, and this great boon under certain necessary limitations is freely offered to the suffering poor. Gentlemen, in the name of the managing Committee, of the staff and all concerned, I beg to tender you our sincere thanks for the kind manner in which this toast has been received."

Mr. JOHN WOOD in proposing the London School of Dental Surgery, expressed his satisfaction at having had many opportunities of observing the degree of efficiency with which the dental students had been prepared for their future duties. He expressed his conviction that the study of comparative anatomy aided the cause of progress in Dental Science, as conducing to a wider view of the subject and a higher level of scientific knowledge, and that no man is ever made into a worse operator or manipulator, because he knows the difference between an elephant's compound grinder and the poisoned fang of a serpent. "The fact is that the sphere of every art touches in some point or points the general circle of the sciences, and I adduce in proof of all this the examples which have been mentioned by our Chairman, the examples of Owen and Tomes. But it is not only on one point that the dental art touches on science. Few scientific discoveries have been more valuable in alleviating pain than ether, and we owe the production of that anæsthetic to the dentist Morton. I cannot refrain from alluding to the very eloquent remarks of our Chairman in recommendation of the great advantage of having a Dental Hospital in the centre of this great metropolis. In this great city there are pretty nearly five millions of individuals, mostly, I believe, teeth wearers and teeth bearers, and the immense amount of experience and application to charitable ends which this represents, I may venture to say is not equalled in the whole world. For their services in the cause of humanity, for their services in the cause of technical education and for their services in the cause of applied science, I think we owe the dental profession our best thanks. I beg therefore to propose 'The London School of Dental Surgery.'"

Mr. MORTON SMALE in responding, pointed out that the school

was a very important factor in the organization of the Dental Hospital. The staff, able and willing as they are to do all the work that the Dental Hospital is provided with, could not possibly do it unaided by the students, as witness this month's report, which showed 4,368 operations, 507 gold fillings, 1,109 plastic or soft fillings, 1,800 extractions, 600 under nitrous oxide gas, and no case was allowed to leave the hospital that had not been seen by one of the officials of the hospital. He spoke of the other Dental Hospital, which also did excellent work, rejoicing that there was no spirit of rivalry between them, a fact that was sufficiently proved by the presence of members of its staff on that occasion. Mr. Smale, in conclusion, alluded to the growing demand for more space, and the imminence of an appeal to the public to help a hospital and school which he felt to be the best in the world.

The College of Physicians and Surgeons was proposed by Mr. SIBLEY, and responded to by Sir RISDON BENNETT, and Mr. CHRISTOPHER HEATH.

Mr. S. J. HUTCHINSON proposed the visitors, which was responded to by Dr. BRISTOWE.

Mr. CARTWRIGHT proposed the chairman, and Sir JAMES PAGET having responded the evening terminated.

Between the speeches some excellent solo and part singing, conducted by Mr. J. Turle Lee, added considerably to the pleasure of the evening.

General Medical Council.

Thursday, February 17th.

REPORT OF THE FINANCE COMMITTEE.

Sir HENRY ACLAND, President, in the Chair.

Sir WILLIAM TURNER: I wish, Mr. President, to draw attention to the subject of Dental Finance. It is a matter which this Council should give consideration to. I have been looking into the minutes for the last few years upon this question, and I find that on January 1, 1881, it is reported that the Dentists' Fund amounted to £9,824; in 1883 it amounted to £9,220; in 1885 it was £9,017; in 1886 it was £8,445; and in the present year it is £7,465. It follows, therefore, that the Dentists' Fund, during the six years which it has been under our management,

has sustained a diminution of £2,359. If this process of diminution goes on in anything like the same proportion that it has been going on during the last six years, the vanishing point of the Dentists' Fund is almost within one's observation. This is a very serious matter, and I think an especially serious matter for us to consider, seeing that the dentists have no representative on this Board. We are in the position of trustees for the dentists, they themselves not having a representative here. It is the case of the administration of the fund of one body by another body, the body "A" that administers not having any representative on it of the body "B," whose funds are to be administered. Of course this is not a matter that the Medical Council, with regard to the institution of such a method of administration, had anything to do with, because it was imposed on us by Act of Parliament, but, being so imposed, the responsibility is necessarily a great one that we have incurred in connection with it. If you will look at the last paragraph of the Report of to-day, you will find it stated that the expenditure for the year is considerably more than the income, and that that state of things has been going on all along. Ever since the time when the funds of the dentists were entrusted to the charge of the General Medical Council, the expenditure has been in excess of the income. The income of the Dentists' Fund is derived from two sources, partly from interest on the investments, and partly from the current fees received year by year for the purpose of registration; and the expenses attached to this fund are greater than these two sources of income combined. That being the case, it seems to me to be a very serious question indeed for us to consider, are we to go on in this way, expending this fund at a greater rate than its income? I think it is a question which we shall have very seriously to consider; whether something cannot be done in the way of diminishing the ratio of expenditure, so that we may get a balance between income and expenditure, which we certainly have not got at the present time. In making these observations I do not wish either the Finance Committee, or my two friends the treasurers, to suppose in the least degree that I am making any reflection upon them—far from it. I am merely stating these facts to the Council, and I think from their importance the Council is bound to give them consideration, seeing that we are a body exercising the functions of trustees, without those for whom we are acting as trustees having any representation here, or any power of expressing their opinions.

Dr. QUAIN said, that as Sir W. Turner had referred to a portion of the report dealing with the Dental Fund, he would say a few words on the subject, leaving other questions to be answered as they might arise. Sir W. Turner had done well in directing attention to the position of the Dental Fund. There could be no doubt whatever that if the expenditure of the Dental Fund exceeded its income, the time must come sooner or later when the Fund would be expended and become bankrupt. It should be remembered that the Council was not responsible for this state of matters. The Dentists who had charge of the Dentists' bill which became the Dental Act, must have been fully masters of the subject. They thought it well to cast on the Council the duty of carrying out the details of the act, and the Council had done its utmost to fulfil the duty imposed on it. The operations of the Council, owing to its composition, were of an expensive character. Those operations now included a considerable portion of Dental business, the cost of which must be borne either by the funds of the Council, or by the Dental Fund. Now it would be very unreasonable to take from the Council Funds contributed by the medical profession, the means of carrying out the Dental business. The expenditure must come from the Dental Fund itself, which truly was being exhausted. He quite agreed that some means must be adopted if possible to prevent a final catastrophe. He did not see how the expenditure could be lessened. There were some 6,000 Dentists to be dealt with, and 24,000 medical practitioners. The Dental Fund was originally charged with one-fourth of the general expenditure. This could not well be reduced. It would be unfair to the Medical Profession to ask them to contribute funds for carrying out the Dental Act. The injustice would not be less manifest when it was stated that the work imposed by the Dentists, so far as the office was concerned, was very little inferior to that required for the Medical Profession. In fact the claims made on the services of the Registrar and its staff were most unreasonable. He saw only one method by which the Dental work could be done on a less costly system. It was one proposed in the Duke of Richmond's Medical Bill, and one which he (Dr. Quain) pressed for at the time of the passing of the Dental Act. The plan was simply this—that the Medical Council should have the power to appoint a Board for carrying out the operations of the Dental Act. The Board might be composed of members of the Medical

Council, and members of the Dental Profession—gentlemen competent to form a judgment on Dental subjects. They might be authorized to frame regulations subject to the approval of the Medical Council, and perhaps, if needful, the Privy Council. Such a Board could not be constructed, save by the authority of Parliament, and sooner or later something of the kind must be accomplished.

Dr. A. SMITH said he knew as a member of the Dental Committee that the Dental business was transacted with great pains in order to make its administration as economical as possible. He had had the honour of being on the Dental Committee ever since the Act had passed, and in his recollection there had been only one special meeting of that Committee. On all other occasions the business had been combined with the ordinary meetings of the Executive Committee as supplemental to them, so that they only paid a small share of the expense of the sitting instead of having separate meetings for Dental business. If he was wrong in that statement Dr. Quain would be able to correct him, but he could not recollect more than one case of a special Dental meeting. He entirely agreed with what Dr. Quain had said as to the onerous duties imposed upon the Council by the Dental business.

Dr. MATTHEWS DUNCAN said he desired to ask a question which Sir William Gull and Dr. Quain would be able to answer. Had any communication been made to the dentists as to the unfortunate position in which their monetary affairs stood, and was it not the duty of the Council to let them know fully the desperate position in which they were placed?

Mr. MARSHALL said he wished to encourage the dentists to take the course which Dr. Quain desired, namely, to sever themselves if possible, at all events financially, from the Medical Council. At present the registration of Dentists was at a very low ebb, 25 or 26 a year, but students were coming on to the register varying from 75 to 100 a year, and in a few years, therefore, dentists would have increased resources, and that ought, he considered, to encourage them to feel that they might be able by and by to run alone.

The Odontological Society of Great Britain.

AT the usual monthly meeting of this Society, held at 40, Leicester Square, on Monday, the 7th inst., Mr. FELIX WEISS in the chair, Mr. AUGUSTUS WINTERBOTTOM showed in full action what appeared to be a most successful adaptation of electricity to dental requirements. The current was generated by a zinc and carbon battery of eight pairs of cells which would work for from fourteen to twenty-one days without recharging at the cost of half-a-crown a week. By means of an electric motor this could be used to drive the dental engine, or it could be used for illuminating purposes, or to work a Bonwill mallet, the strength of the current being readily controlled by means of a "switch board." At the end of the meeting Mr. Winterbottom gave a demonstration of the capabilities of his apparatus, which was watched with great interest. The advantages were, first, the absence of fatigue to operator ; secondly, that owing to the rapidity and steadiness of the action the operator could cut away a tooth very quickly, with little pressure and with much less pain to the patient than when the ordinary pedal action was used, and the operator's body being perfectly steady, the instrument could be directed with greater nicety.

Mr. LATCHMORE said he had had a similar arrangement in use for some months, and had derived the greatest possible satisfaction from it ; he could endorse all that Mr. Winterbottom had said in its praise.

Mr. BRUNTON and Mr. WEISS also took part in the discussion.

Mr. HERN showed a good specimen of mal-apposition of the rodent teeth in a rabbit. It was lent for exhibition by Mr. C. D. Davis of Brixton.

The other casual communications having been postponed, the Chairman called upon Dr. DUDLEY BUXTON to read his paper on "the Physiological Action of Nitrous Oxide," being a continuation of one which he read before the Society on the same subject in March of last year.

Dr. BUXTON began with some introductory remarks on the physiology of respiration and the physical properties of nitrous oxide, especially in its relations to oxygen and carbonic acid. The blood was capable of taking up nitrous oxide by simple absorption, and possibly by the union of the gas with the albuminous materials found in the liquor sanguinis and corpuscles,

though this had not as yet been proved. Careful experiments showed that it did not affect the elimination of carbonic acid from the lungs, and had also shown that it would oust oxygen when in solution and take its place. It was in fact evident that the gas must have a strong affinity for some of the blood constituents in order to explain the extraordinary rapidity with which it was carried to the nervous centres and brought about the profound changes of which the anæsthetic coma was the external evidence.

In all experiments upon mammalia with nitrous oxide, methods had been adopted which not only ensured a supply of this gas to the lungs, but at the same time cut off the ingress of oxygen, so that there was always a danger of confounding the symptoms caused by nitrous oxide with those which arose solely from deprivation of oxygen; and further, in some of the experiments a third set of symptoms intruded themselves, viz., those dependent upon the re-breathing of noxious exhalations from the lungs. From want of attention to these sources of fallacy some authorities had looked upon nitrous oxide narcosis as insensibility due to a state of partial asphyxia, but, as he had pointed out in his former paper, there were several very marked and obvious differences between the two conditions as regards the state of the pulse, respiration and nervous phenomena; and whereas no true anæsthesia is brought about in asphyxia, entire loss of sensation and voluntary movement come about in a minute when nitrous oxide is employed.

It being obvious, therefore, that nitrous oxide produces its effects by direct action upon the nervous centres, Dr. Buxton made some experiments with the view of ascertaining what physical changes it induced in the condition of the brain and spinal cord. An opening in the skull of a dog was made with a trephine, and the animal was then made to inhale nitrous oxide. At first the brain was seen pulsating at some distance below the bone and of a pinky red colour. But as the animal began to breathe the gas, the brain pulsations became more forcible and somewhat hurried; then the brain substance was seen to swell up until at last it actually protruded through the trephine hole, and at the same time its colour changed to a red-purple and then to a bluish hue, the pulsations at this stage being diminished both in amount and frequency. The gas being discontinued, the brain gradually receded, the pink colour returned, and the pulsations resumed their normal rhythm.

A similar experiment was then tried with the trachea occluded. In about a minute the brain assumed a deep purple hue and began to recede, sinking away from the trephine hole; during the next minute the colour became darker, and the sinking continued. Then respiration became slow and irregular, and then ceased, the heart still beating. There was thus a marked contrast in the state of the brain during nitrous oxide inhalation, and during the progress of asphyxia. The changes observed in the cord under the same conditions were precisely similar.

Another set of experiments showed that the heart's action was but little affected by nitrous oxide, even when inhalation was pushed until respiration was interrupted; its effect was to steady and slow the heart's action and to diminish the arterial blood pressure. During asphyxia, on the other hand, a rapid and continuous increase of blood pressure invariably occurs. The contrast in the effect of the two conditions upon the internal organs was equally marked. Thus in the case of the kidney, contraction ensues during nitrous oxide inhalation; whilst the effect of asphyxia is at first to cause enlargement, followed in the later stages by rapid contraction.

Having discussed at some length the effects of nitrous oxide upon the respiration, circulation, and on the nervous centres, Dr. Buxton proceeded to make some practical deductions. He expressed himself as being strongly in favour of a free supply of gas. Whatever might be the saving of gas resulting from the employment of supplemental bags, he held that the bad effects resulting from re-breathing the pulmonary exhalations far outweighed it. He attributed to this practice the cases of severe headache, vertigo, dizziness and other unpleasant symptoms which occasionally followed nitrous oxide inhalation.

He considered that during the administration it was more important to watch the respiration than the pulse. Death might occur secondarily from cardiac syncope, due to fear or shock in a nervous subject, or one debilitated by suffering, but such cases were, as regards nitrous oxide, extremely rare. Even when respiration ceased it could be at once re-established by pressure on the thorax.

Finally, he referred to the liability of patients to hallucinations, frequently of an erotic nature, and the necessity for having a witness present on all occasions. It might also, at first sight, be thought that gas was contra-indicated in the case of patients who

were liable to epileptic seizures, but it appeared that the sedative action of nitrous oxide on the nervous centres prevented the excitement which an operation would otherwise occasion, and thus diminished the chances of an attack.

In the course of the discussion which ensued, Mr. BRAINE suggested that the explanation of the cause of nitrous oxide insensibility might be found in one of the experiments which Dr. Buxton had described, that it was due in fact to increased brain pressure. In the case of the dog which had been trephined the brain was seen to swell until the pressure from within was so great that a portion of the organ actually protruded beyond the skull. He thought it might fairly be inferred that the same thing occurred in the human patient, the cerebral tissue swelling until the pressure against the cranial cavity was sufficient to cause insensibility; and all parts of the brain being equally pressed upon complete unconsciousness would result. The effect would be the same as in the case of pressure from meningeal hæmorrhage or effusion of blood on the surface of the brain.

Mr. BAILEY said he could scarcely believe that such an amount of pressure on the brain could be induced by nitrous oxide as to produce insensibility. He was more disposed to attribute this effect to the direct sedative action of the gas on the nervous centres, just as was the case with morphia and other similar drugs. With regard to the practical point referred to by Dr. Buxton, he fully agreed that the best plan was to give the gas freely with an open expiratory valve, and to do away with the supplementary bag as much as possible. He found that when given in this way the average consumption was about seven gallons per patient, that the anæsthesia was more perfect, and that any bad after-effects were very rare.

Prof. VICTOR HORSLEY remarked that Mr. Braine's suggestion that the anæsthetic effect of nitrous oxide was due to mechanical compression of the brain could be easily put to the test. The removal of the upper part of the cranium in an animal was not an operation of much difficulty or danger to life, and if Mr. Braine's hypothesis was correct, an animal which had been anæsthetised by the gas would recover its consciousness as soon as the skull-cap was removed, and it would be impossible to produce any further insensibility by its means. He (Prof. Horsley) thought it would be found that the gas did not act in the mechanical way which had been suggested, though perhaps he had no right to

make the assumption, but should rather await the result of the experiment.

Dr. HEWITT criticised some of Dr. Buxton's experiments, especially with reference to the distinctions between nitrous oxide narcosis and asphyxia. The two conditions were mixed up together, and it was impossible to draw a distinct line between them. Dr. Buxton had compared the condition of the brain when nitrous oxide was being respired, with that which occurred when the trachea was occluded. But in the latter condition the blood would be drawn from the brain to the thorax through the large vessels. The proper plan would have been to make the animal breathe nitrogen or hydrogen. He altogether disagreed with what Dr. Buxton had said with reference to the disadvantages of the supplemental bag. He believed he had established by proofs that its use, under proper conditions, was beneficial to the patient, and produced a longer period of anæsthesia. He had never been able to discover that there was any danger, or even discomfort, resulting from its use. He believed that the gain of time was due to the fact that even when the greater part of the air had been got rid of from the lungs, and replaced by nitrous oxide, a small amount of oxygen still remained, which being re-breathed, though not sufficient to interfere with the effects of the gas, still fed the respiratory centres for a longer time than when absolutely pure nitrous oxide was given.

Dr. BUXTON briefly replied. He admired the ingenuity of Mr. Braine's hypothesis, but could not bring himself to believe in it; he hoped, however, to have an opportunity of performing the experiment suggested by Professor Horsley. He was not satisfied with the conclusiveness of Dr. Hewitt's experiments, and still held to his preference for the open expiratory valve, instead of the supplemental bag.

The usual vote of thanks having been proposed by the Chairman, the meeting terminated at an unusually late hour.

The next meeting will be held on Monday, April 4th, when a paper will be read by Newland Pedley, F.R.C.S., L.D.S., &c., on
*The Pathology of Pyorrhœa Alveolaris."

MINOR NOTICES AND CRITICAL ABSTRACTS.

The Density of the Teeth as influenced by the Food, &c.

THE following annotation from our contemporary *The Lancet* is of direct interest to our readers, and we therefore publish it, together with two letters to the same Journal bearing upon the subject of the annotation :—

“Dr. W. D. Miller of Berlin has recently communicated to the American Dental Society of Europe the results of his experiments upon dogs, to show the effect upon the teeth produced by the absence or presence of lime salts in their food. Every dental surgeon knows that the hardness of the teeth may vary greatly in the same individuals at different periods; the most marked, although by no means the only cases, are those of pregnant women; and this cannot be explained solely on the ground that the secretions of the mouth are vitiated by reduced acid from gastric disturbance. There is undoubtedly an absolute softening of the whole tooth substance, due, probably, to the robbing of the teeth of the mother of their lime salts in order to build up the osseous system of the foetus. Dr. Miller is endeavouring to show experimentally how far changes can be produced in teeth. His *modus operandi* is to extract a tooth from a healthy dog, and then to feed the animal upon food containing but little lime salts for three months; a second tooth being now removed, the food is changed to one containing an excess of salts. This is continued for four months, when a third tooth is extracted. From the results of chemical analysis, he finds that there is an appreciable loss of lime salts in the first stage, amounting in one case to more than one per cent., and during the second stages that the proportion of lime salts rises to normal. The number of experiments has not been sufficient to give absolutely conclusive results, and no microscopic examinations have been made. Dr. Miller himself points out that Zalesky and Hoppe-Seyler, in their similar researches, maintain that the bones are not only deficient in lime salts, but that there is an absolute rarefaction, so we should expect some similar change in the teeth. We should also like to hear of some experiments on pregnant animals.”—*Lancet*, December 18th, 1886.

"To the Editors of THE LANCET.

"SIR,—Every dental surgeon knows that the hardness of the teeth may vary greatly in the same individuals at different periods ; the most marked, although by no means the only cases, are those of pregnant women ; and this cannot be explained solely on the ground that the secretions of the mouth are vitiated by reduced acid from gastric disturbance. There is undoubtedly an absolute softening of the whole tooth substance, due, probably, to the robbing of the teeth of the mother of their lime salts in order to build up the osseous system of the foetus.' This extract (apparently a quotation from the writings of Dr. Miller of Berlin) occurs in an annotation in THE LANCET of December 18th. It is certainly not the case that every dental surgeon adopts these statements as true ; and I venture to affirm it will be difficult to find one competent authority who will accept any or either of them. It is hardly possible to imagine the occurrence of degenerative or nutritive changes in a tissue like enamel—the tissue in which caries begins. To believe in such changes we must first conceive of some means by which this calcareous substance, as dense as quartz and devoid of cellular elements, could assimilate nutritive material when conveyed to it : and we must next imagine the conveyance of new and effete material to and from the vessels of the pulp, through the odontoblast layer of the pulp, and through the dentinal fibrils to its destination in the enamel. The evidence is overwhelming that dental caries is due entirely to external agents ; that enamel and dentine are perfectly passive under the process of disintegration ; manifesting neither pathological action nor vital re-action of any kind. A dead tooth replaced in the mouth as an artificial substitute is just as liable to caries as its living neighbours ; when it is attacked decay begins in those situations where it would be most liable to disease were it living, and the decay is true dental caries, identical in every way with the disease in living teeth. There exist three demonstrated predisposing causes of caries which enable us to understand clearly its common association with diseases and cachexiæ. Given, 1st, innate structural imperfections in the tissues—from which few sets of teeth are free,—varying infinitely in different individuals ; 2ndly, crowding and irregularity of the teeth, equally varying in degree ; and 3rdly, vitiation of the secretions of the mouth, not only varying in amount, but highly irregular in its appearance and duration through the life of different individuals—and the facts

are fully accounted for without the invention of the questionable hypotheses which Dr. Miller has adopted. These hypotheses, which were held by early writers before the anatomy of the teeth was made out, have not been supported by investigators working in the light of modern science. They have, however, recently been revived by some few American writers. Some of these state that they have been enabled to demonstrate the presence of a distinct substance between the prisms of enamel, having stained the tissue with chloride of gold. On the strength of this they write of a 'complete network of protoplasm extending from the pulp to the surface of the enamel.' If such a substance do exist, it must be in a condition of extreme tenuity, and it is impossible to accept the gratuitous and unnecessary hypothesis that this trace of organic matter is a medium through which nutrition as well as gross degenerative changes are brought about in enamel.

"I am, Sirs, your obedient servant,

"HENRY SEWILL.

"*Wimpole Street, Dec. 20th, 1885.*

"*.* To open up our columns to a discussion on the causes of dental caries is not possible on account of want of space. It is a subject which is as yet by no means satisfactorily explained; but Mr. Sewill's theory that the teeth only play a passive part has very few supporters (*vide* a discussion at the Odontological Society some time ago). Experiments like those of Dr. Miller will doubtless clear up many points that are now difficult of explanation. In our annotation, tenth line, 'vitiating by reduced acid from gastric disturbance' should read 'vitiating or rendered acid by gastric disturbance.'—ED. L."

"*To the Editors of THE LANCET.*

"SIRS,—Far be it from me to throw cold water upon any honest experimentation, especially upon the work of an observer who has won his spurs, as Dr. Miller has, by years of careful experimental work in the field of bacteriology. Still, it appears to me that more weight has been attributed to the three experiments upon the feeding of dogs on a diet deprived of lime salts than is legitimate, and, indeed, than Dr. Miller himself claims for them. He used for analysis, at intervals, two upper canines and one lower, or *vice versa*. Dr. Galippe has shown that the specific gravities (which correspond pretty closely with the chemical composition) of corresponding teeth on the two sides of the mouth

differ, as do those of the upper and lower jaws, in the same individuals. Dr. Miller's results show only small differences in the percentage compositions of the teeth during the period of his experiment, and these differences are discordant. It need hardly be pointed out that an average drawn from nine discordant analyses has not the faintest significance. If any inference as to probabilities is to be drawn from so small a number of cases, the one which suggests itself to me is that the feeding was productive of no traceable result at all upon the teeth. It is also said that it is a fact familiar to dentists that the teeth of an individual undergo alterations in character as to density, &c., at various periods during life. Everyone knows, of course, that caries advances with very varying rapidity at various periods; but it is a mere begging of the question to assume that this is due to alterations in the teeth and not to alterations in their surroundings. This matter is, however, too wide a one to enter upon in this place, so I will only say that, personally, I have never seen any case lending support to this idea.—Yours faithfully,

"Jan., 1887.

CHARLES S. TOMES."

Shedding of Teeth in Tabes Dorsalis.

AT an ordinary meeting of the Pathological Society of London, held on Tuesday, February 15th, Dr. Hale White read a paper on "The Falling of Teeth in Locomotor Ataxy," and related the case of a man, aged forty, who had had the first symptoms of locomotor ataxy eight years earlier; ataxy had been present for one year, and the lightning pains for nine months. When admitted taste was impaired, there was anæsthesia in various parts of the body, and girdle pain; all the reflexes were absent, there was loss of sexual power, and some diarrhoea. A wisdom tooth was exhibited which had fallen out two years ago without any previous signs of decay; it was quite healthy. The other teeth were ground down, but otherwise quite healthy. He was treated with iodide of potassium, and went out of the hospital after showing some improvement. Dr. Hale White mentioned some references to this subject. Thus, Richardière (*Rev. de Méd.*, No. 2, 1886, p. 170) related how in a patient suffering from tabes the face and mouth swelled; all the teeth of the upper jaw fell out one by one, without any previous caries; after this a few pieces of bone came away from the palate. Hoffman (*Berlin. Klin. Wochen.*, No. 12,

1885) mentioned a case in which all the teeth fell out of the upper jaw without any apparent cause, and two years after, tabes dorsalis showed itself. Dr. Lewis (*Amer. Journ. Nerv. and Mental Dis.*, No. 2, 1885) also gave cases. Dr. Hale White considered that before allowing that this was a definite symptom of tabes dorsalis, we should notice many more cases, for the teeth were liable to fall out from so many causes. Dr. F. Semon said there were two varieties of shedding of the teeth—one in which the tooth simply drops out, and in the other where part of the alveolus breaks off as well. In cases of gastric and laryngeal crisis such teeth and bone changes should be specially looked for, in view of Dr. Buzzard's theory of the association of the trophic bone centre with the pneumogastric centre. Mr. Bennett spoke of an affection of middle life in which from the socket of the teeth a discharge of serum or pus took place, and in some of which cases nodules of tartar developed on the periosteum, and fragments of dead bone came away. It was an absolutely painless affection, the pathology of which was much disputed. Gout and imperfect nutrition were ascribed as causes. Dr. G. N. Pitt referred to two cases of tabes in which a larger number of teeth had been lost than was usual at the age at which the patient had arrived. Dr. Ormerod alluded to a case of well-marked tabes in which a part of the alveolus with three teeth had spontaneously broken off. The man had had syphilis. The neurologists considered the fracture due to tabes, but some others—syphilographers—thought the case was due to the syphilis. Mr. Bland Sutton referred to four cases of disease of the spinal cord in animals which had perforating ulcers and nerve troubles. They were carnivora, and all had softening of the alveolus with shedding of teeth, though they were animals who should have had a full supply of teeth. Sir James Paget thought it was a subject of much importance, and required further investigation.—*Lancet*.

Modification of Junker's Inhaler suitable for Medical Work.

By FREDERICK A. FLOYER, M.B., Cantab.

SOME time since, while my Junker's Chloroform Inhaler was being repaired, I had occasion to fit up a temporary apparatus, which I find so much more serviceable for medical work and minor surgery, that I venture to describe it.

Take a Squire's perforated zinc respirator, remove the sponge and bore a hole below. Insert tubing, supported by a short glass piece inside. Connect with an ordinary wide-mouthed 3-oz. bottle, furnished with the requisite cork and glass tubes. To the longer of these latter affix double-valved bellows.



The cost is as follows :—Respirator, 4d.; 4 ft. $\frac{1}{8}$ in. tubing, 8d.; bottle and glass tubing, 2d. The bellows, with 2½ ft. tubing attached, can be obtained for 2s. Total, 3s. 2d. Any portion, therefore, which gets broken can easily be replaced. The somewhat clumsy face-piece of Junker's apparatus is here represented by a small, close-fitting one, in which the limited amount of chloroform vapour is further attenuated by a copious and regular supply of air. The effects produced are hardly strong enough to place a patient well under chloroform for a surgical operation, but are sufficient to keep up anæsthesia for any length of time.

The greatest value is shown in the perfect relief of paroxysmal pain without real narcosis being produced. On ceasing to pump, consciousness is regained at once, and no nausea or other after-effects are apparent. The face-piece should be held by the patient, whose hand drops as the pain disappears. Paroxysms of pain may be relieved for many hours without any cumulative effect taking place, and, owing to the great and equal dilution of the chloroform vapour, it may be entrusted to the hands of any intelligent nurse.—*British Medical Journal*.

THE JOURNAL OF THE NEW INVENTIONS.

A New Form of Continuous Gum Work.

WE have had submitted to us for inspection some continuous gum work made by Mr. Lombardi, of Argyll Place. The specimens submitted to us were a very near approach to nature in appearance, but Mr. Lombardi does not claim any particular superiority in this respect. The advantages of his plan are briefly these :—(1) The gum body is a substance recently manufactured by Messrs. Ash, and identical in structure with their tooth substance ; it is as hard, as strong, and consequently as durable. (2) It can be worked at a considerably lower temperature than Allen's gum body, and consequently Ash's teeth can be used with it, which, of course, was not possible in the case of Allen's material. (2) It can (for the same reason) be worked on hard platinum, whereas the high temperature required for Allen's material necessitated the use of soft platinum (purified from iridium)—a twofold advantage, because the plate can be both thin and strong, and, what is still more important, will not yield to the shrinking of the body, and so lose the accuracy of the fit. (3) The gum colour is not a uniform tint, but can be disposed in any varying intensity, and in any sort of shade that may be desired for a particular case, so that with a very little care a special appearance of gum in an individual case may be fairly closely copied and reproduced. Specimens may be seen at Messrs. Ash's, and are well worth an inspection.

Mr. Lombardi will prepare a series of tints to facilitate the process of matching.

ANNOTATIONS.

IN the report of the meeting of the Representative Board which we publish elsewhere, our readers will see that some important changes of office bearers have taken place. Mr. James Parkinson has been compelled by ill-health to resign the treasurership of the Association. Mr. Parkinson has throughout his long connection with Dental Reform always borne his part in every struggle ; he has guarded the purse of the Association, and controlled its finance, during the trying period of its infancy. Of all posts difficult to fill, perhaps the post of treasurer is the most irksome, and we owe no small debt of gratitude to the clear-headed business capacity,

and the unshrinking self-sacrifice that have distinguished our old and valued friend in undertaking and carrying out so onerous a duty. We trust that now, although he is released from the burden of official duties, we may still, for many years to come, count upon his sound advice in the conduct of our affairs.

THE treasurership thus vacated will be occupied by Mr. F. Canton, whose ungrudging labours as Hon. Secretary to the Association have earned him the gratitude of all our well-wishers. The post of Hon. Secretary is perhaps the most responsible and the most onerous of all our offices ; no one who is not familiar with the working of the Association can know what a tremendous amount of extra work and harassing anxiety it involves. We believe the strain was proving injurious to Mr. Canton's health, and we cannot therefore regret that we shall for the future retain his services in the less trying though none less responsible post of treasurer. Mr. Canton's successor is the able and popular dean of the Dental Hospital of London, Mr. Morton Smale, and if the heavy duties do not prove too much for Mr. Smale's health we feel confident that the interests of the Association will not suffer under his secretaryship.

AN individual of the name of Partridge, whose name has been erased from the Dental Register by the Medical Council, has taken the initial steps to obtain a *mandamus* to compel that body to reinstate his name on the Register, and his proceedings have called forth a forcible article in *The Medical Press and Circular* for March 9th. Mr. Partridge obtained his registration by virtue of holding the Licentiate'ship in Dental Surgery of the Royal College of Surgeons of Ireland. To obtain this diploma it was necessary, in addition to satisfying the examining body that he possessed a certain amount of knowledge, to sign an undertaking "That he would," to quote our contemporary, "observe the bye-laws of the College, preserve its 'reputation, honour, and dignity,' and, specially, would refrain from advertising, and, if adjudged by the College to be guilty of violating this undertaking, would at once surrender his diploma to be cancelled." The College considered that Mr. Partridge did not conform to this undertaking, and finally struck him off their rolls and called upon him to return his diploma, and consequently the Medical Council erased his name from the Register because he had forfeited the qualification

by virtue of which it had been placed there. The Irish College was of course within its rights in withdrawing its diploma when the undertaking under which it was granted appeared to it to have been clearly violated ; the Medical Council having registered a man on the strength of his diploma could not retain his name on the Register when that diploma had been formally withdrawn ; the time is passed when a name can be placed upon the register because its owner was in practice prior to a certain date ; it is, therefore, not easy to see at present upon what grounds Mr. Partridge bases his claim to be reinstated.

THE inaugural address of the President of the Students' Society of the Dental Hospital of London contains a great many very important suggestions, and we cannot but rejoice that the rising generation have the benefit of the advice and guidance of so sensible a councillor as our esteemed honorary treasurer, Mr. F. Canton. Mr. Canton urged upon his audience the importance of placing their names on the Register, and explained to them the objects and ends the attainment of which was the *raison d'être* of the Association. It cannot be too strongly placed before the mind of our student-world what is the meaning of being on the Register. They cannot be too forcibly reminded of the pains and penalties which may attach to an omission of this precaution. "In a court of law," said Mr. Canton, "the production of this Register is the only legal proof of a person being legally qualified to practise dental surgery." This is a most momentous fact. An individual who is not registered has absolutely no protection in the practice of his profession, whatever his diplomas, and even if he is an L.D.S., he may be prosecuted for calling himself a dentist. He is incapable of recovering fees in a court of law ; he may be summoned on juries ; he may even be compelled to serve in the militia, or to assume onerous civic duties (very possible and unpleasant contingencies in a provincial town). He is, in fact, not a recognised practitioner at all ; he cannot call himself one ; he cannot enforce payment as one, and he cannot escape the amenities of citizenship from which his brother practitioners are free. In view of these facts, it is difficult to understand how any of our rising generation can refuse to avail themselves of the privilege of registration, and we hope that Mr. Canton's address will remove the doubt from the minds of any waverers who may still hesitate to avail themselves of the immunities conferred by the Dentists Act.

A DENTAL directory is, we understand, about to be issued from 27, Margaret Street, Cavendish Square, professing to follow upon the lines of the Medical Directory. We cannot see the advisability of a directory separate from the Medical Directory, and we do not think the scheme will commend itself to the profession at large, the very existence of such a directory seeming to infer that our branch of the profession is something apart from and independent of the general medical body. If this specimen entry is to be taken as an example of editorial care and supervision, we think the phrases "Dental caries their (*sic*) cause," and "Penostitis," are not promising indications of the care with which the work is to be produced:—

SPECIMEN :

LLOYD, Richard, The Mount, Cardiff, L.D.S., R.C.S., London, 1880, St. Bartholomew's Hospital, Member of the British Dental Association, Fellow of the Royal Geographical Society, formerly Lecturer of Anatomy, Dental Hospital, London, Author of "Dental Caries, their cause," Contrib., "Case of Penostitis, *The Medical and Professional Review*, 1886.

The prospectus of the directory contains the announcement of a new dental journal, and we cannot feel very sanguine of the success of this enterprise either. We do not think another dental periodical likely to prove a successful speculation, but time will show. "The proof of the pudding," as the proverb says, "is in the eating."

We have recently had our attention drawn to a substance called lanolin, by Mr. Fletcher of Warrington. It is the fat recovered from sheep's wool, and for some purposes will doubtless prove of value to the dental surgeon, owing to one peculiar property it possesses, in common with the well-known "goose grease," *i.e.*, its power of penetration through the skin and its rapid absorption when applied externally. Unlike goose fat, it is practically free from smell, and its value as a vehicle for the application of veratria and other similar agents will no doubt soon become generally known. Lanolin is now an article of ordinary commerce readily obtained at a small cost, and it appears probable that in a very short time it will replace both vaseline and lard as a vehicle for external application.

THE following notice has been forwarded to us for insertion :—
Examining Board in England by the Royal College of Physicians of London and the Royal College of Surgeons of England. Notice is hereby given that the business of the examinations for the diplomas of the two colleges, under the old regulations as well as under those of the Examining Board, will be conducted on and after Monday, the 14th March next, at the Examination Hall, Victoria Embankment, London, W.C. All applications relating to those examinations should be addressed to the Secretary of the Examining Board in England, Mr. Frederic G. Hallett, at that address.

WE have been asked to express an opinion upon the relations between general practitioners and dental surgeons in the matter of the payment of fees for mutual professional services. Our correspondent complains that we are often charged full fees by medical men, while we are always supposed to attend the profession for nothing. We think all qualified men with a proper sense of their position would decline a full fee for operations performed upon a fellow practitioner of surgery, and therefore consider the medical man who charges full fees for advice to a licentiate in dental surgery is acting contrary to the traditions of the profession; at the same time we hope and believe such charges are rare. The expenses attending mechanical work are however of a nature that would probably prevent any one from accepting such work as a gift.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—On the 24th Feb., at the meeting of the Board of Examiners for the diploma of Licentiate in Dental Surgery, consisting of John Wood, F.R.S., Jonathan Hutchinson, F.R.S., and J. W. Hulke, F.R.S. (on the surgical side), and A. Winterbottom, F.R.C.S., L.D.S., C. S. Tomes, F.R.S., L.D.S., and J. S. Turner, M.R.C.S., L.D.S. (on the dental side), the following gentlemen, having passed the necessary examination in Dental Surgery, were admitted Licentiates of the College.

Buckley, Charles Herbert, 54, Shaw Road, Oldham.

Clifford, Isidore, 8, Grosvenor Street, W.

Cunningham, George, 2, King's Parade, Cambridge.

Dalby, Alfred Burkitt, 33, Rodney Street, Liverpool.

McAlpine, Kenneth Wade, 36, Tregunter Road, South Kensington.

Thompson, Archibald Frederick Charles, 108, Guildford Street, W.C.

Harris, Percy Reeves Traer, 24, Chapel Street, Penzance.

The following course of demonstrations is in progress at the Glasgow Dental Hospital:—February 19th, Contouring, by J. R. Brownlie, Esq.; February 26th, Cocaine, by W. S. Woodburn, Esq.; March 5th, Electric Mallet, by Rees Price, Esq.; March 12th, by Dr. Woodburn; March 19th, Gold Filling, with Dental Engine and Mallet, by O. Fergus, Esq.; March 26th, Amalgam Filling, by J. A. Biggs, Esq.; April 2nd, Continuous Gum Work (for any make of tooth), by James Cumming, Esq.; April 9th, 16th, and 23rd, Anæsthesia, by Dr. Brown.

ELSEWHERE we publish the subscription list to the Waite Testimonial Fund. It is gratifying to find that the members of the Association do not forget the willing services of the hon. sec. of the Midland Branch in the cause of dental reform. Letters of sympathy and respect have been received in large numbers by the promoters of the fund, and the Committee purpose binding them in vellum for presentation with the testimonial, and there is nothing, perhaps, more likely to temper the severity of the terrible loss our valued fellow-worker has sustained, than the knowledge that the profession he has served but too well feel so deeply and sincerely for him in his trouble.

THE Annual Meeting of the Odonto-Chirurgical Society was held on the 11th inst., W. Bowman Macleod, L.D.S., F.R.S.E., in the chair. There was a large attendance of members. A full report of the proceedings will appear in our next issue, together with a list of the office-bearers for 1887-8. W. Herbert Williamson, M.B.C.M., L.D.S., D.D.S., was elected President for the ensuing year.

In the evening the members of the Society and friends dined together in the Balmoral Hotel, D. Waite in the chair; G. Austin, Biggs, Croupier.

WE are requested to insert the following corrected list of officers to the Students' Society of the Dental Hospital of London:—
President: Mr. F. Canton, M.R.C.S., L.R.C.P., L.S.A., L.D.S.
Vice-Presidents: Mr. H. Parkinson, L.D.S.; Mr. H. Lloyd Williams, M.R.C.S., L.D.S. *Treasurer*: Mr. Herbert Williams, L.D.S. *Secretaries*: Mr. Chas. F. Rilot, L.D.S.; Mr. Geo. Seymour. *Curator and Librarian*: Mr. Jas. F. Colyer. *Coun-*

cillors (Second Year's Students): Messrs. A. P. Cater, A. R. Colyer, H. Picton, T. S. Rendall, and C. C. Robinson; (First Year's Students) Messrs. R. H. Bates, W. H. Dolamore, W. A. Hooton, and A. D. Horne. By some mistake the nomination list was sent to us last month instead of the list of those who were elected.

AT the last moment before going to press we have received a letter from our friend Dr. Barrett, the Editor of the *Independent Practitioner*, which will give so much pleasure to Dr. Waite, to his personal friends, and lastly to all English dentists, that we have inserted it at the risk of delaying this issue. We cannot imagine anything more gratifying to the object of the testimonial than this graceful expression of genuine and heartfelt sympathy from America. Neither can we doubt that it will form an additional link in the friendly chain that is bringing American and English dental surgeons into closer relationship every day. The letter will form an important addition to the collection that is to be bound in vellum.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

The Waite Testimonial Fund.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—By the February number of your Journal, just at hand, I see that it is in contemplation to present to W. H. Waite, of Liverpool, an address and a purse of money, to mark the appreciation of his English brethren for unselfish labour in their behalf, and as a token of sympathy for the loss of sight which compels his withdrawal from active practice of his profession. Dr. Waite has many friends in America, who, I doubt not, would be very glad of the opportunity to contribute to this fund, and thereby express their great regard for him as a man and a professional brother, and at the same time show their deep sympathy with every good work in which their English brethren are engaged. They do not know, however, whether American contributions would be entirely compatible with the objects of the projectors of the fund.

If the matter is to be closed up early in April there is, of course, not sufficient time to obtain the necessary authority to receive subscriptions on the part of any Americans, or to present the matter to the dentists of this country. In that case we can only regret that the

opportunity was not given in time. If, however, the fund is to be kept open yet longer we should be glad to be so informed at once, provided our co-operation would be desirable. Perhaps the amount to be received would not be as significant as the expression of sympathy in the case, which I can assure you, sir, is active in this country.

Very truly yours,

W. C. BARRETT.

The Independent Practitioner,
208, Franklin Street, Buffalo, N.Y.,
March 2nd, 1887.

A Hard Case.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—A fashionable contemporary of yours is in the habit of devoting a column weekly to the discussion of what are termed "Hard Cases." These are incidents in social life, in which some individual, by no fault of his own, has found himself in a disagreeable or awkward position. A statement is made as to how he fell therein; the readers of the paper are asked to decide what he ought to have done under the circumstances; and those contributors who, in a given time, are adjudged by the Editor to have furnished the greatest number of correct answers, are awarded prizes. I venture to suggest it might not be amiss if you would open a somewhat similar department in our Journal—a page devoted to the ventilation of individual grievances in professional life, whether arising between practitioners, or practitioner and patient, or being incidents of anxiety and trouble occurring in the management and treatment of cases. Of such grievances my professional career I suppose has had no more than its due share; and, indeed, I imagine the word grievance may need definition, for a trouble which to a thin-skinned man of hyperæsthetic temperament may form a deep and grievous wound, may not inflict so much as a scratch upon an individual blessed with a moral hide of proper pachydermatous structure. Then, again, some men are more hurt by a sentimental than a real injury, and I recollect once hearing a sensible professional brother remark that he found it sometimes less disagreeable to be robbed by a gentleman (?) than to be paid by a snob. This is, however, by the way, and not quite to the point.

I will, if you will allow me, open a "Hard Case" department of the Journal with one of my own. This will be made clear by publication of the enclosed report of proceedings in a County Court and by the following remarks. The defendant taking no notice of my solicitor's application for payment, a summons was applied for, and this was set down for hearing on Tuesday, February 8th, at 10 a.m. Punctually at this hour I was in attendance with my solicitor. Except for a brief adjournment for ten minutes, we were kept in court until 3.30, being

told our case might be called on at any moment. Many cases were, however, on the list before ours ; some of these occupied a few, some many minutes to decide. At the latter hour named the court was informed that the case then on would last for the rest of the sitting, and further business must be put off till next day at 12. We were again in attendance at the hour fixed, and after a delay of not more than an hour and a half our case was called, and decided within a very few minutes.

I presume I shall get the one pound eleven and sixpence. In recovering it, I have lost a day and a half's work, with the inconvenience of missing appointments previously made, not expecting to be detained more than an hour or so one day ; and I shall have to pay my solicitor his just dues for services, including attendance at the court for so many hours. The amount sued for does not carry such costs. The ordeal of sitting for many hours in a crowded, ill-ventilated court, exposed to a fearful current of cold air, may be added to complete the tale of this "Hard Case." If I am asked myself what I think I ought to have done I should answer nothing—or perhaps I ought to have been content with offering the mild expostulation which I did in the first instance. What do your readers think ? I will only add that although I do meet with some cases of ingratitude, and although a certain number—very few—patients forget for a time they owe me fees and never afterwards remember, I have very little to grumble at in this matter. I find patients are ready and willing to pay moderate fees and any fee which they have agreed upon in cases where previous agreement seems necessary ; and I feel bound to add that the cases in which I have been obliged even to threaten to compel payment during the years of my practice might be numbered on the fingers of one hand, and the case I now report is the first in which I have proceeded to extremities. In any sense of the word, I do not think my action has paid me as a private individual ; do your readers think I ought on public grounds to have acted as I have described ?

Your obedient servant,

A.

COUNTY COURT.

Wednesday, February 9th.

BEFORE THE JUDGE, A, M.R.C.S., L.D.S., *versus* X.

Mr. ———, solicitor, appeared for the plaintiff, A. He stated that the defendant, X, applied to A in November, 1886, for professional services. A saw him on four occasions. He examined all the teeth, advised the defendant fully as to their care ; prescribed a tooth powder, and prepared and filled two cavities. In all, three hours of time were occupied. At the last visit, in reply to defendant's inquiry, A said the charge was three guineas. The defendant thanked him,

said he would send a cheque, and left. He did not fulfil this promise ; and in due course a note was sent by A's secretary, reminding him of the debt. In reply to this, A received the following extraordinary communication :—" Mr. X encloses a cheque for £1 11s. 6d., which he thinks is quite enough for filling two teeth." In reply, A wrote reminding the defendant of the time occupied in preparing the teeth with temporary fillings, &c., &c., and stating that he could not submit to such treatment, and would certainly compel payment if it was not at once made. Neither this nor his—the solicitor's—application receiving any response, A felt reluctantly obliged to go on with these proceedings.

A, being sworn, deposed to the truth of his solicitor's statement.

The defendant, having entered the witness box, was asked by the judge if he had any question to put to A.

The DEFENDANT : No.

The JUDGE (to defendant) : You have heard what A says. He states that your teeth were tender, and he had to prepare them for stopping, and he did stop them. He also prescribed for you and gave you advice about your teeth, occupying altogether three hours of his time. Is that so ?

DEFENDANT : Yes.

The JUDGE : Did you ask A what was his charge on the last visit ?

DEFENDANT : Yes.

The JUDGE : Did he say three guineas ?

DEFENDANT : Yes.

The JUDGE : Did you reply you would send a cheque ?

DEFENDANT : Yes.

The JUDGE : Did you not intend to do so ?

DEFENDANT : I said I would send a cheque, but did not say for how much.

The JUDGE : Have you any other remark to make, or any question to put to A ?

DEFENDANT : I thought three guineas too much for filling two teeth.

The JUDGE : Judgment for the plaintiff.

The Michigan Diploma.

TO THE EDITOR OF THE " JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I have no wish to take up your time by useless remarks about titles, but I would like to give your readers a few correct ideas about the dental department of the University of Michigan. First, the time required to take the degree of D.D.S. is not *six* months but three terms of nine months in each year ; this takes practically three years of the student's life and gives him a vacation, of three months during the hot weather, and his time is daily occupied

from eight in the morning till 5.30 in the evening, with only one hour, from twelve to one, for dinner. The subjects he has to study are anatomy, physiology, histology, chemistry, materia medica, oral pathology and surgery, gynecology, pathology, dental anatomy, operative dentistry, prosthetic dentistry and sanitary science (this last is optional). His practical work comprises clinical dentistry, prosthetic dentistry, histological laboratory, practical anatomy, and chemical laboratory. On medical subjects he is not examined by the dental faculty but by the medical, and must have a certificate from the latter to present to the former of having sustained a satisfactory examination, or he cannot graduate; and the same in his chemistry, he must satisfy the professor of chemistry and get a certificate from him, or take another course of lectures on the subject and so on until he can pass a satisfactory examination, and so get his certificate. There is only one exception to this rule of three years that is in the case of a man who has already been engaged in the practice of dentistry for above twelve months, then he may by hard work graduate in two years, and to do this he must take his dissections during the holidays. Further, I would add no man coming to this country can get a diploma in six months that is worth the paper it is written on; it would be just as sensible to buy one without coming, or cheaper still to style himself D.D.S. without any diploma; the class who do these things are the ones who bring discredit on American diplomas, and are as much an object of scorn to the dentists on one side of the Atlantic as the other. I should add that an L.D.S. cum curriculo, might perhaps graduate in one term of nine months. I am an L.D.S. Dub. sine curriculo, and find it hard work to get through in two years. A DENTAL STUDENT OF MICHIGAN UNIVERSITY.

Ann Arbor, *February 21, 1887.*

A Personal Experience with Cocaine.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—As the effect of cocaine when injected for extraction seems still exciting a good deal of attention in the profession, perhaps a personal relation may be of some interest.

Last Friday night a second lower molar on the right side, which had been threatening periostitis for some time, became so painful that at one o'clock a.m. I rose and applied aconite and iodine and a cap-sicum plaster, but without relief. The tooth was so tender that swallowing or touching with the tongue gave acute pain. At two o'clock I again rose and determined to attempt extraction under cocaine. I first injected one grain by two punctures into the loose tissues below the root of the tooth on the outside. Within half a minute all the anguish was gone, but there still remained a definite pain at the root of the tooth, and it was still painful on pressure. I

now injected half a grain on the lingual side of the tooth, as nearly opposite the apex of the posterior fang as possible. In four minutes from the first injection I extracted the tooth with a hawk's bill forceps at the second attempt. In the first, after moving the tooth, the forceps slipped on the external side of the tooth, which was decayed a good deal below the gum. Anæsthesia was complete in the gum, which was somewhat lacerated; in fact, there was complete paralysis of sensation in the gum, for I did not know till afterwards that the forceps had touched it. There was some pain in the inflamed spot at the end of root, but still this was quite bearable. The general and local sensations were unmistakable. In a minute from the first injection there was a peculiar sensation all over the body, which was not exactly that of nausea or faintness, but more like that produced by exhaustion from cold or want of food, a decided dimness of sight, and sense of depression at the pit of the stomach, but no failure of pulse or ringing in the ears. In two minutes there was a free perspiration over the face, but without any pallor or falling of pulse; by this time also there was decided numbness of the right cheek and lips beyond the angle of the mouth and as high as the cheek bone. There must have been also some local motive paralysis, as I found in extracting that I could not retract the angle of the mouth sufficiently to see, and had to hold the lips back with the left hand. At ten minutes after injection the pulse became very slow and feeble, and I took a tea-spoonful of spirits of sal volatile. In fifteen minutes there was noticeable diminution in the numbness of cheek and lips, and in two hours this and the general uneasy sensation had nearly disappeared. I was not able to sleep for the rest of the night, but spent a pleasant time shooting the next day, and have felt no further effects. On the whole, the experience has greatly increased the confidence with which I use cocaine.

Yours truly,

3, Princess Square, Plymouth,

F. D. BALKWILL.

February 22nd, 1877.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—The discussion at the West of Scotland Branch on hydrochlorate of cocaine in relation to its effect as a local anæsthetic for extraction of teeth (which is reported in this month's Journal) is highly instructive. The paper by M. George Viau is also of very great interest to us in the use of cocaine. We members of the British Dental Association are often called upon for communications as to our every-day practice, and as the use of cocaine has now become more general I will give you my experience.

I have used the hydrochlorate of cocaine, as recommended by Dr. Hunt of Yeovil, occasionally for about a year. I first got my cocaine from Reynolds and Branson, Leeds, in papers of 1 gr. each, but now

the same firm supply the glass capsules, which are far better. I got a test tube five-eighths inch in diameter, and ground it through its length to about 2 inches long. The grain of cocaine is dropped in first, and then 10 m. of hot water added by means of the syringe, and the solution is ready.

When first using the cocaine I obtained various results, successes, and failures, and after-effects in several patients; sometimes what I call a palsied condition of the tongue and lips, causing great inability to rinse the mouth; a fixed expression of the eyes has generally accompanied the above symptoms. One patient I had whom I especially remember, because the after-effects came on again on her return home. She had never been induced to take gas, as she could not make up her mind to breathe it properly. I used cocaine in this case, and, watching the patient's eyes when I had a firm hold of the molar, I know little, if any pain was felt, as the patient remarked. In the afternoon patient's father came, and described his daughter as being quite prostrate. I told him it was due to the operation, and patient was soon quite herself.

Some cases were quite successful, one patient remarking some time after having a tooth removed that she would come any distance to have cocaine used.

I now wrote to Reynolds and Branson, Leeds, and asked had they had any similar cases of after-effects reported to them. They kindly suggested that these after-effects must be caused by the patient swallowing or getting the cocaine on tongue and cheek or lips. I am happy to inform you that since this advice I have never seen as yet the least sign of paralysis of cheeks or tongue. Of course I am now very careful to prevent the least sensation of the drug, if possible, from escaping the napkin, &c., which must always be used.

Please note M. George Viau's method now that he is using the cocaine solution and carbolic, and mark how careful he is to keep the punctures of the needle closed with finger and pledgets of cotton wool, "so as to receive any leakage, and thus prevent any of the anæsthetic liquid from penetrating the air passages or digestive tract." Another good hint from the same author is "let the patient rinse the mouth before operating, and to inject half way between the neck of tooth and the presumed end of the root." I think the needle will enter more easily and pass onward more readily than trying to enter the top of gum. In fact I have proved this to be the case.

In the discussion on the subject of cocaine at the West of Scotland Branch, Mr. Cummings tells us of the bad effects the drug had upon himself. He had two carious centrals to be extracted; a half grain was injected "at apex" of above-mentioned teeth—meaning the roots. As some cocaine came through the fistula on the tongue, I presume the drug was injected into this septic matter, and by the force of the syringe distributed all over the soft surrounding tissues, and this may

probably account for the puffy appearance of the lip, and as some cocaine leaked out on the tongue, may we not presume that some of the drug was swallowed? I have never heard of any one injecting at the apex of the roots of teeth before. I think with Mr. Brownlie that five minutes is the outside time to wait after injection, and where roots are firmly fixed in dense alveolars success is *certainly doubtful*.

I will give one more case. A patient presented herself with both inferior right and left bicuspid aching. One tooth was loose, and both had been patched up for years, as patient wore a lower case; I injected cocaine to the loose one, and patient felt nothing of extraction. After waiting quarter of an hour I injected the other one and operated. Patient said she thought it worse than if I had not used anything. To sum up, what an uncertain local anæsthetic cocaine has been for extracting teeth; but I certainly feel more confidence in its usefulness now than I did with first experiences.

I remain, dear sir,

Yours faithfully,

G. B. PEARMAN.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—The interesting communication in the Journal of 15th inst., concerning the uses of cocaine in Dental Surgery, induces me to mention two classes of cases in which I have found the drug of very great service. Of the first I can speak without the least hesitancy, having used the remedy more or less constantly since December, 1884. The cases are those in which the rubber-dam is to be retained in position by means of ligatures or clamps, which from the necessity of the case demand a considerable pressure upon the gum tissues. The consequent discomfort, sometimes amounting to positive pain, I find is entirely obviated by the use of a 5 per cent. solution of the hydrochlorate, applied a few minutes before the rubber is adjusted, when the gum may be pushed aside and the cavity more easily reached.

Regarding the second class of cases, in which the palate, uvula, &c., possess abnormal sensibility, and in which the slightest touch produces uncontrollable nausea, all unpleasant symptoms of this sort may be allayed by an application of cocaine of from 2 to 5 per cent. to the parts. I have twice used the drug in cases where the threatened sickness defied all efforts at attaining anything approaching to an accurate impression, and the results were such as to warrant one in a continuance of the practice.

I have now ceased to use the re-agent as an obtunder of sensitive dentine, finding on repeated trial that the patient's imagination often leads to most misleading results; while as a local anæsthetic in the extraction of teeth and pulps I have not met with an uniform success, though no case has presented itself in which any of the unpleasant symptoms mentioned in the Journal have developed.

Trusting that the drug will soon receive the attention of the Odontological Society, or other authoritative body,

I remain, yours faithfully,

Glasgow, February, 1887.

OSWALD FERGUS.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—May I venture to sound a note of warning against the reckless injection of cocaine hydrochlorate. It seems to be commonly accepted that one grain of this drug in solution is required to relieve the pain attendant upon the extraction of any given tooth, and I desire to say that after considerable use for over twelve months past, my experience tells me that one grain is far too much, and if indiscriminately used, there will be a high percentage of systemic effects of a more or less grave character.

While fully aware that two or even three grains have occasionally been used without unpleasant symptoms, I quite believe that the injection of that quantity will be followed by very grave symptoms indeed in the majority of cases, as, in my own experience, several patients have been quite prostrated with one grain and even less.

To sum up, while cocaine is a very valuable addition to our pharmacopœia, it is not to be trifled with, and it will be found that half a grain of the hydrochlorate is quite sufficient to relieve the pain of extraction of any tooth, and that amount should rarely be exceeded in any one injection, and if it is desired to use another half grain, there should be an interval of half an hour.

Being fearful of occupying too much of your valuable space, I have not ventured to describe any of the unpleasant symptoms alluded to, but will gladly do so if the subject is considered sufficiently interesting.

I am, &c.,

Bradford.

E. J. LADMORE.

The International Medical Congress.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—In *The Independent Practitioner* for March, 1887, which is just to hand, we are favoured with a list of the officers who are to represent the Section on Dental and Oral Surgery at the forthcoming International Medical Congress, which is to be opened at Washington D.C. on the 5th of September, 1887. It is a list full of honoured names, but an analysis of it has grievously disappointed me. Here is a concise summary :—The United States are fitly and abundantly represented ; Germany is represented by Drs. Busch, Herbst, Holländer and Parreidt ; France by Drs. Andrieu, Brasseur and Magitot ; Sweden by Dr. Förberg ; GREAT BRITAIN BY NO ONE ! How is this ? Is it due to jealousy, or have our American brethren lost sight of our existence ?

Yours faithfully,

March 11th, 1887.

COSMOPOLITAN.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their Subscriptions for the current year were due on the 1st of January, and should be remitted to the Treasurer, at 40, Leicester Square.

According to the Bye-laws of the Association, Members who are one year in arrears are not entitled to receive the Journal.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. 4.

APRIL 15, 1887.

VOL. VIII.

The General Medical Council and the
Dental Fund.

IN our last issue attention was called to a discussion at the Medical Council in which the bankruptcy of the Dental Fund, which is in the hands of that body, was foreshadowed, and a hint was dropped that in that event the Council might desire to be rid of the responsibility of conducting the registration.

The matter is one of such importance that no excuse for again referring to it is needed, and indeed, in the article in question we promised to do so. The point at issue is this: the initial formation of the Register placed in the hands of the Council a large capital sum, amounting to, roughly speaking, over Nine Thousand Four Hundred Pounds. In succeeding years the amount available for the

expenses of maintaining the correctness of the Register, its annual publication, legal expenses arising out of cases as they occur, &c., has been derived from the interest upon this capitalised sum, as well as from the fees paid for new entries upon the Register.

Now the charges made upon the Dental Fund are so heavy that these two sources of income do not meet the current expenditure, and so the capital sum is dwindling year by year, and the disproportion between income and expenditure is each year greater.

The expenses charged against the Dental Fund may be divided into two groups, which may profitably be considered separately ; the one those expenses which are actually incurred in the carrying out of the special dental work, which would only be open to criticism if it could be shown that the work was extravagantly done, and the other that proportional charge levied as its contribution towards the general expenses of the Medical Council, which forms a very large item in the balance-sheet.

It is, of course, perfectly right that the Dental Fund should pay something, but it is equally clear that it has hitherto paid a great deal too much. At the outset it was decided, apparently upon the grounds that the Dentists' Register contained one-fifth of the total number of names in the Medical Register and the Dentists' Register together, that the Dental Fund should pay one-fourth of the general expenses ; that is, house rent, salaries, taxes, &c. Setting on one side the peculiarity of the arithmetic, was this fair ? It must be emphatically stated that no additional accommodation in the way of offices or other room was required ; no additional number of clerks above those who were there before ; and, indeed, so far as we have been able to ascertain, no additional expenses beyond a well-earned addition to the registrar's salary.

Thus, whilst we had, of course, no right to expect to be allowed to share in the Medical Council's accommodation without paying for it, yet so far as the Council were concerned they were the gainers, just as much as though they had let off a part of their premises and received for it a fourth of their entire rent, &c. ; so that since the existence of the Dental Fund medical registration has been conducted by that amount more cheaply.

Latterly it has been recognised that one-fourth was too large a contribution, and it has been reduced to one-fifth, but it may well be questioned whether even this is not too much, for no one can pretend that the dental business engages one-fifth of the energies or time either of the Council or of its permanent staff, and the only basis of the calculation by which the proportion was fixed seems to have been that of relative numbers upon the two Registers. Now, every one knows that the numbers upon the Dentists' Register were unduly swollen by the view taken by the Council as to the admission of a very numerous class with feeble claim for registration, and these names having once got on, stay there without giving rise to any trouble or to business in any form, hence the numbers should be pretty largely discounted.

To turn to the other class of expenses, namely, those separable and incurred in the conduct of dental business there are many items, such as printing, &c., which could only be challenged upon the ground that there was a want of economy in their management, which we do not propose to do; but there is another very heavy item which can hardly be passed without notice even in a very cursory treatment of the subject, and that is the expenses incurred in the discussion of dental questions by Committees or by the full Council, which come in the form of fees paid to the members for these services. A medical contemporary has

calculated that the deliberations of the Medical Council cost a guinea a minute, we ourselves think that about twenty-three shillings would be nearer the mark. Their collective wisdom may be worth this amount when they are considering questions upon which they are quite at home, but it may be doubted whether their discussions during the conduct of dental business have been so much to the point as to be valued at so liberal an estimate.

It is almost proverbial that professional men are bad men of business, and we fear that the Medical Council has not done much to redeem the profession from this reproach ; a good deal might, however, be done in the way of the reorganisation of its methods of work, not only in dental but equally in its general business. In its history up to the present time there has been a strange disproportion between its attained results and the time, ability (that is ability of its individual members) and money expended.

Before the Council is in a position to complain that they, prospectively, are likely to be saddled with expenses owing to the dental registration failing to meet its current outlay, all these matters should be fully and fairly met, and their house set in order in the matter of the conduct of business.

Dental Education in America.

SCARCELY has the last shot been fired in the battle waged in our columns about foreign diplomas, their value, and the rights they convey in this country, when the arrival of our March exchanges discloses to us the fact that great anxiety is felt in America upon the same subject. In America, as in England, those who wish dentistry to be an honourable profession have to struggle and fight against those who would debase it to the condition of a trade conducted without moral principles or

common honesty. The struggle is an uphill one, and knowing what we have gone and are still going through ourselves, we can heartily sympathise with those who are fighting for the same cause in America. But though we knew that the mischief was tolerated to a pretty considerable extent beyond the Atlantic, we hardly thought things were quite so bad as they really are. The cry has gone up simultaneously from three of the most influential of American periodicals — *The Cosmos*, *The Independent Practitioner* and *the Dental Review*.

The Cosmos contains a letter giving the details of some interesting legislation bearing upon the subject, of which a brief account will we are sure interest our readers. The state of Illinois has a statute requiring those who would practice dentistry either to pass an examination by the State Board, or to produce a diploma from a "reputable" college. In 1884 the State Board refused to recognize the diploma of a certain college as "reputable." An application was made to the supreme court for a mandamus to compel the Board to accept the diploma on the ground that the law had defined what was reputable, and the Board had no discretion in the matter. The Supreme Court decided, however, that the Board had discretion, and the mandamus was refused.

The Board subsequently adopted the following resolution :—

"*Resolved*, that after June, 1885, the Illinois State Board of Dental Examiners will recognize as reputable only such dental colleges as require, as a requisite for graduation, attendance upon two full regular courses of lectures and practical instructions, which courses shall be of not less than five months' duration, and shall be held in separate years, with practical instructions intervening between the courses. Such colleges must also require a

preliminary examination before admitting students to matriculation, provided that no certificate from a high or normal school or other literary institution is presented by the candidate."

In 1885, the North Western College of Dental Surgery was founded at Chicago, and declared that it would adhere to the above requirements for its candidates. One J. Cooper obtained his diploma there and applied to the Illinois State Board for a licence, which was refused, and after some delay he was informed that his case had been referred to the National Association of Dental Examiners, and until they met no licence could be issued; his fee of 1.00 dols. was returned. He resolved to try legal means, but before a petition could be filed he received a letter from the Board, stating that if he would wait until a meeting could be called a diploma would be issued. He waited, and the Board refused the licence on the ground that the college was not "reputable," and the petition was accordingly filed containing a very remarkable array of charges, among other things it charged the Board with being engaged in a conspiracy to ruin one college, because four out of five of the members of it had a pecuniary and professional interest in another rival body, and had flagrantly abused their powers to protect their own institution. The Board *did not deny the truth* of this serious accusation, but pleaded their discretion and the former decision of the Supreme Court; this time, however, the decision of the Court was against them. They appealed to the Appellate Court of Illinois, which also decided against them on the ground that by publishing their requirements they had exhausted their discretion, and that they had not denied the "false, fraudulent, and malicious" motives which had actuated them. A mandamus was granted. The Illinois State Board has, we understand, finally appealed to the Supreme Court.

In the *Independent Practitioner*, under the title of "Is This True?" Dr. Koch unearths and translates an outcry from Dr. Heinrich, of Germany, in the *Monatsschrift*, bewailing the influx into that country of a host of disreputable half-educated quacks and charlatans adorned with the title of doctor, and hailing from America. Germans, *who do not understand a word of English*, are, so says Dr. Heinrich, taught dentistry for a few weeks and then examined *in English* and certificated, the examination being held *privately*! the servant or porter of a dentist who has been in such employ for five years can easily obtain a certificate as a "five years' man." Philadelphia has recently required a certificate of a knowledge of English from students, but no Germans have graduated there since. One college demands two years curriculum at the college, but a case is narrated of an individual who after nine months' residence in America, returned to Germany and figured on the list of graduates at the expiration of the two years, and notwithstanding his absence of fifteen months, his name is down as participating in a winter session (1885-6) when he was actually in Germany. Dr. Heinrich and Dr. Koch, both seem to think there is a special kind of dentistry which is peculiar to America, but we hope for the sake of the Americans that this is not so, the science and art in its highest developments are practised now in most civilized countries, and we trust America will not allow shameless swindling to be associated with her name. Dare we hope that the answer to Dr. Koch's query will be that it is not true?

Lastly, in the *Dental Review* (Chicago), there is a moderate, wise, and impartial leader dealing with the responsibilities of Dental Colleges. The writer does not hesitate to use the literary probe and lancet for the patient's good; he does not scruple to disclose shameful practices, because he knows that exposure alone can bring about a better state of things.

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are the men America wants to purify and elevate her profession, and though we candidly think the protest is delayed longer than it should have been, we are glad to hear their voices raised in protest. In England on the Continent there is scarcely a single dental charlatan who does not pretend to be an American with "special methods," &c. If the really good America will only take up the matter, disavow the others, and suppress the abuse, there is no fear for the future of dentistry here or there: but the longer they are the longer will the struggle for reform last, and the more difficult will it be to get removed the stains on our name.

Colleges that advertise for patients by means of huge signs of "Teeth extracted free," "Only charge for cost of material," "It will pay you to call on us before going elsewhere," &c., are, indeed, nice nurseries in which the next generation may learn professional etiquette. What ethics are we to expect from the *alumni* of such dental tooth dressing shops? The existence of such "schools" (heaven save the mark!) is a scandal to civilization and so long as they continue to pour out fledglings and budding charlatans into an unsuspecting world so long will it be difficult to convince society that dentistry is a high and honourable calling. A few more bold and unflinching protests, like those that form the basis of this article, will inaugurate a crusade of public opinion in America for which America will receive the thanks of every civilized community.

APPOINTMENTS.

WILLIAM H. JONES, L.D.S., R.C.S.I., 25, Castle Street, Wrexham, and Argyle Street, Wrexham, has been appointed Surgeon to the Cottage Hospital, Whitchurch, Salop.
J. HAMPTON GOFFE, L.D.S., Lond. and Edin. Assistant Surgeon to the Birmingham Dental Hospital, has been elected Lecturer of Dental tutor to the Queen's College, Birmingham.

There is Nothing New under the Sun.

WE are not sufficiently well disposed towards the advertising dentist of the present day to give him any assistance in the drawing up of his specious announcements, but as we hope that such persons do not read this Journal, we may venture to point out that something near perfection in the art of penning a quack's manifesto was attained two centuries ago by the notorious Earl of Rochester, he of whom Bishop Burnett wrote, that he was "a man whom the muses were fond to inspire, and ashamed to avow, and who practised without the least reserve that secret which can make verses read more for their defects than for their merits."

This nobleman, in disgrace as he often was, and banished from the court for some act of profligacy more than ordinarily flagrant, amused himself by taking up his abode near to the Tower, under the disguise of a quack doctor; his address to the public, which is very amusing reading and is quite a masterpiece in its way, brought him no small custom. A good deal of it deals with subjects not quite delicate, but he was also prepared to do great things in the way of dentistry, as witness the following extract:—

"I will also cleanse and preserve your *teeth* white and round as pearls, fastening them that are loose; your gums shall be kept entire, as red as coral; your lips of the same colour, and soft as you could wish your lawful kisses. I will likewise administer that which shall cure the worst of breaths, provided the lungs be not totally perished and imposthumated; as also certain and infallible remedies for those whose breaths are yet untainted; so that nothing but either a very long sickness or old age itself, shall ever be able to spoil them."—*Alexander Bendo.*

Degenerate though we may be to-day, the frail beauties of the merrie monarch's court knew the pangs of tooth-

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Nor was it reserved for nineteenth century sages to a sugar-plum theory to account for it, for in that fully frank picture of the manners of the time, the *Memoirs of Count Grammont*, we read of its hero "as for you appear quite charmed with being decked out in ribands, with writing letters to your mistress, and your pockets with citrons, pistachios, and such sort of trifles, with which you are always cramming the poor mouth, in spite of her teeth."

From the same source, or rather from the notes added by Walter Scott to his edition of the "*Grammont Memoirs*" I take the following:—

1. Rogers died December 31st, or January 1st, 1713, aged 26, of the anguish of cutting teeth, he having cut four teeth, and had several ready to cut, which so inflamed his gums that he died thereof."

There is a third dentition with a vengeance; poor old Rogers, in his halcyon days groom of the bed chamber to Charles II., and, if we are to give credence to contemporary satire, purveyor of forbidden sweets to that august monarch, to die at last of the "anguish" of cutting teeth.

ASSOCIATION INTELLIGENCE.

Annual General Meeting.

GENTLEMEN who may be willing to read papers or give demonstrations at the Annual Meeting, are urgently requested to put themselves in communication with the Hon. Secretary, Mr. Mortimer, and to furnish him with as full particulars as possible defining the nature of their communication and the time they require to occupy.

West of Scotland Branch.

The concluding Monthly Meeting of the Session was held at Academy Hall, St. Vincent Street, on Thursday, March 24th, 1881. J. R. BROWNLIE, L.D.S.Eng. in the chair.

Mr. CAMPBELL, of Dundee, was present and showed the Hastie Patent Water Motor, and his adaptation of it to the dental engine.

Mr. J. A. BIGGS passed round an upper vulcanite denture, demonstrating a method of lining the palatal surface with gold, and which, in his opinion, obviated some of the defects of Mr. Cunningham's process. The flask being packed in the usual way, and on the palatal surface of the rubber was laid a sheet of thick gold leaf (say 10 or 20), and upon this a sheet of tissue paper, and finally a piece of stiff net. The cover was then put on and the case vulcanised in the usual way. The object of the tissue paper is to prevent the net adhering to the gold.

Votes of thanks were given to Mr. Campbell and Mr. Biggs for their communications.

The meeting then discussed the arrangements necessary on the visit of the British Dental Association in August next, and ultimately the following committee was appointed with full powers.

Committee—Messrs. J. R. Brownlie, L.D.S.Eng. (President elect); W. S. Woodburn, L.D.S.Glas.; John Melville, L.D.S.Glas.; James Cumming, L.D.S. Glas.; J. A. Biggs; A. B. Young, L.D.S.Glas.; W. F. Martin, L.D.S.Glas.; J. M'Cash, L.D.S.Glas.; D. R. Cameron, L.D.S.Glas.; W. Gray, L.D.S.Glas.; Alex. Smyth, L.D.S.Glas.; W. S. Gillespie, L.D.S.Glas. (Glasgow); J. Moore Lipscombe, L.D.S.Eng. (Kilmarnock); J. Stirling, L.D.S.Eng. (Ayr); A. Wilson, L.D.S.Edin. (Edinburgh); W. Campbell, L.D.S.Eng. (Dundee); C. S. Sinclair, L.D.S.Glas. (Helensburgh); Alex. Fraser, L.D.S.Glas. (Largs); Rees Price, L.D.S.Eng.

Southern Counties Branch.

AN informal meeting of this branch took place on the 26th of March, at the Town Hall, Brighton, and the following members were present :—Messrs. W. B. Bacon, Tunbridge Wells; Vanderpant, Kingston-on-Thames; J. Cornelius Wheeler, Southsea; J. E. Welch, Brighton; J. H. Redman, *Hon. Treasurer*; J. Denant, *Hon. Secretary*; J. N. Stoner, Brighton; Cooksey, Worthing; Wonfor, Brighton; Reinhardt, Brixton; Hoole, Thornton Heath; Morgan Hughes, Croydon; Barton, Eastbourne; Beadnell Gill, Upper Norwood. In the absence of Mr. Alderman Rymer, the President, who had taken a trip to America, Mr. Vanderpant took the chair.

The following subjects were discussed :—"Cocaine," introduced by the Chairman ; "Pivoting Crowns," introduced by Dr. Redman, who explained Dr. Bütner's system, and showed a specimen of the work, together with the complete apparatus for producing it, which was generally admitted to be most ingenious.

Mr. BARTON, Eastbourne, exhibited a model of the upper jaw of a young lady of twenty-one, who was well developed, showing the absence of laterals and canines. There was no history of hereditary peculiarity, and in four years no further change had taken place. Mr. Barton also showed a very large specimen of Calculus taken from the posterior root of a second upper molar.

Mr. AMOORE, of Hastings, had sent to the meeting an interesting and unique specimen of lower canine with two roots.

The HON. SECRETARY showed a model of the upper jaw of a boy of fourteen, in which the right lateral incisor had exchanged places with the canine in consequence of the pressure of two supernumerary teeth of singular form.

The HON. TREASURER exhibited a model of the upper jaw of a man who had received a severe injury involving the loss of incisors and canine of one division, and a very considerable sequestrum which has yet to be removed. He also showed a specimen of full upper and lower dentures of continuous gum work, done by Verrier's process, which was much admired.

The HON. SECRETARY reminded the members that their next meeting would be the first Annual Meeting at Croydon in July, and as the Annual Meeting of the parent Association would this year be as far north as Glasgow, it was probable they would have a large attendance of members and visitors. The Council was most anxious that the credit of the Southern Branch should be maintained by the character of this meeting, and they hoped a few volunteers might be found to read papers, early notice of which should be given to the Hon. Secretary.

The informal and conversational character of this meeting was found to be very interesting to the members. Three fresh members had been elected to the branch, and two to the parent Association, at the meeting of the Council.

West of England Branch.

A MEETING of the Council will be held at the "Plough" Hotel, Cheltenham, on Saturday, April 16th, at 2.30 p.m. Business general.

HENRY B. MASON, *Hon. Sec.*

Midland Counties Branch.

THE Annual Meeting will be held in the Grosvenor Museum, Grosvenor Street, Chester, on April 28th and 29th. A. M. MATTHEWS, Esq., L.D.S., in the chair.

ORDER OF PROCEEDINGS.

Thursday Evening, April 28th.—Members on arriving on Thursday evening are invited to meet at the Grosvenor Hotel, at 9 o'clock.

Friday Morning, April 29th, 10 a.m.—Council Meeting.

11 a.m.—Business Meeting (members only).

12.30.—President's Address. Open to visitors.

1.30 p.m.—Adjournment for lunch.

The President invites Members and Associates to lunch with him at the Grosvenor Hotel.

3 p.m.—Presentation.

3.45 p.m.—Papers and discussions—"A Practical Demonstration on Cutting and Mounting Sections of Teeth for Microscopical Examination," by M. Johnson, L.D.S. (Fellow of the Royal Microscopical Society); on "Amalgam Alloys," by R. Edwards, L.D.S., M.R.C.S.

6.30 p.m.—Dinner at the Grosvenor Hotel. Tickets 7s. 6d., to be obtained at the hotel.

HOTELS—The Grosvenor, The Queen's, The Blossoms, The Westminster Temperance Hotel.

Members and Associates can introduce a friend to all but the business meeting, and the friend's name should be entered in the list of visitors.

The President elect, Fred Bullin, Esq., J.P., has obtained the kind permission of His Grace the Duke of Westminster, K.G., for the members and associates to view the interior of Eaton Hall ("The palace of the Dee"), its gardens and grounds; also the kind permission of W. H. Gladstone, Esq., to visit the ruins and

grounds of old Hawarden Castle, and he has invited members and associates to be his guests during the trip. Hawarden is eight miles, and Eaton three miles, from Chester. It is proposed to visit Hawarden first, thence to Eaton, and to return by the river Dee. Wagonettes and steam boat accommodation will be provided by Mr. Fred Bullin. The party will start from Chester at ten o'clock a.m., and hope to return not later than four o'clock p.m.

The "Waite" Testimonial Fund.

Supplementary List of Subscribers.

Dr. Joseph Walker, London	...	...	...	£5	5	0
C. S. Tomes, Esq.	...	...	...	3	3	0
Malcomb MacGregor, Esq., Edinburgh	...	...	...	2	2	0
William Ladyman, Esq., Liverpool	...	...	...	2	2	0
T. Cooke Parson, Esq., Bristol	...	...	...	2	2	0
R. Edwards, Esq., Liverpool	...	...	...	2	2	0
T. E. King, Esq., York	...	...	...	2	0	0
W. Headridge, Esq., Manchester	...	...	...	1	10	6
T. Tanner, Esq., Liverpool	...	...	...	1	1	0
W. A. Rhodes, Esq., Cambridge	...	...	...	1	1	0
T. Dilcock, Esq., Liverpool	...	...	...	1	1	0
John Stirling, Esq., Ayr, N.B.	...	...	...	1	1	0
J. Jewers, Esq., Plymouth	...	...	...	1	1	0
C. S. Bate, Esq., Plymouth	...	...	...	1	0	0
I. H. Balkwill, Esq., Plymouth	...	...	...	1	1	0
W. Matthews, Esq., Liverpool	...	...	...	1	1	0
G. Pedley, Esq., London	...	...	...	1	1	0
D. Browning, Esq., London	...	...	...	1	1	0
E. I. Ladmore, Esq., Bradford	...	...	...	1	1	0
A. G. Hockley, Esq., London	...	...	...	1	1	0
C. Gaine, Esq., Bath	...	...	...	1	1	0
Alfred Oddy, Esq., London	...	...	...	1	1	0
C. Walker, Esq.	...	...	...	1	1	0
P. Crombie, Esq., Aberdeen	...	...	...	1	1	0
I. S. Durward, Esq., Edinburgh	...	...	...	1	1	0
D. Hepburn, Esq., Edinburgh	...	...	...	1	1	0
J. N. Manton, Esq., Wakefield	...	...	...	1	1	0
J. C. Storey, Esq., Hull	...	...	...	1	1	0
R. Owen, Esq., Wolverhampton	...	...	...	1	1	0
J. Holland, Esq., London	...	...	...	1	1	0
William Palethorpe, Esq., Birmingham	...	...	...	1	1	0
F. Huxley, Esq., Birmingham	...	...	...	1	1	0
George Henry, Esq., Hastings	...	...	...	1	1	0

James Taylor, Esq., Dewsbury	...	...	...	£1	1	0
Messrs. W. & A. Fothergill, Darlington	...	...	...	1	1	0
W. J. Bowden, Esq., Belfast	...	...	...	1	1	0
I. H. Redman, Esq., Brighton	...	...	...	1	1	0
John Trude Fripp, Esq., London	...	...	...	1	1	0
M. Johnson, Esq., Chester	...	...	...	1	1	0
Geo. D. Orrock, Esq., Birmingham...	...	...	...	1	1	0
F. C. B. Cane, Esq., Birmingham	...	...	...	1	1	0
W. Glaisby, Esq., York	...	...	...	1	1	0
I. Royston, Esq., Liverpool	...	...	...	1	1	0
L. Dreshfield, Esq., Manchester	...	...	...	1	0	0
John Humphreys, Esq., Birmingham	...	...	...	0	10	6
F. Hampton Goffe, Esq., Birmingham	...	...	...	0	10	6
F. W. Richards, Esq., Birmingham...	...	...	...	0	10	6
A. B. Wolfenden, Esq., Halifax	...	...	...	0	10	6
James Cooper, Esq., Edinburgh	...	...	...	0	10	6
John Taylor, Esq., Warrington	...	...	...	0	10	6
E. Renshaw, Esq., Mansfield	...	...	...	0	10	6
— Blatt, Esq.	...	...	...	0	10	0

The Treasurer to the Fund, Mr. T. MURPHY, Springfield, Bolton, will be glad to receive *all* "promised" subscriptions, not later than the 20th, of the present month. It is also desirable that *intending* subscribers should remit before that date.

ORIGINAL COMMUNICATIONS.

The Premolar in Man.*

By A. WILSON, F.R.S.E.

THE premolars in man are normally two pairs in each jaw, and as they have two cusps, more or less decided, they are more frequently called bicuspid.

This latter name is, however, far from definite, as we occasionally, although rarely, have bicuspid central and lateral incisors, and also bicuspid canines, the extra cusp in these being due to an enormous development of the tubercle or prominence in the centre of the cingulum. The forms of the premolars in the upper jaw differ very considerably from those in the lower, and while in the latter the distinction between the first and second is decided, there is little comparatively between the two upper. There being, so far as I am aware, no description of the upper premolars in any

* Read at the Students' Society of Edinburgh, March, 1887.

of the dental or anatomical works in our language* sufficiently accurate as to enable one to distinguish even the teeth of the two sides, I will, with your permission, begin by endeavouring to give one, taking the first premolars as the best marked. As in all teeth having a grinding surface, we have in the human premolars five surfaces—namely, labial, lingual, mesial, distal, and grinding.

The labial surface is broadest between the mesial and distal angles of its grinding margin : it tapers somewhat abruptly towards the neck, and is convex longitudinally and still more so transversely. The length from the neck to the mesial angle is much less than that to the distal, and it tapers very abruptly from these angles to the apex of the labial cusp, which is placed decidedly to the *distal* side of the tooth, the slope from the apex to the mesial angle being thus much longer and greater than that to the distal angle.

A well-marked ridge passes upwards from the apex and merges in the general surface about half-way up ; so leaving two lateral depressions, that toward the mesial angle being the larger and more pronounced : occasionally it is deeply grooved.

The lingual surface may be said to be composed wholly of the cusp and its base. It is shorter than the labial, but is much more convex, both longitudinally and transversely. It terminates in the lingual cusp, the apex of which lies *close to the mesial* side of the tooth.

The mesial surface is at its grinding margin nearly flat, but a little from that it becomes *concave*, the depression being greatest toward the labial margin and neck.

The distal surface is much larger than the mesial ; is convex transversely and still more so longitudinally.

The grinding surface is irregularly quadrate, its labial and distal sides being greater than its lingual and mesial respectively. Its centre is occupied by a deep transverse depression, somewhat crescentic in form, the concavity being towards the labial side. From the apex of the labial cusp a well-marked ridge passes upward, ending abruptly in the depression, and occasionally a much fainter one passes from the lingual cusp.

The mesial and distal sides are bounded by a rounded ridge or

* A small work in German, "Anatomie des menschlichen Gebisses," by E. Mühlreiter, Leipzig, 1870, gives a very detailed and, judging by the engravings, extremely accurate description of the human teeth.

parapet continuous with the lingual cusp, that on the mesial side being usually broken by the transverse depression.

The peculiarly irregular form of the grinding surface is best seen if a pair be placed with their mesial sides in contact.

There may be either one, two (labial and lingual), or three (two labial, one lingual, as in the simiadae) roots, two being the most frequent, three being comparatively rare. The divisions may occur at any part, and the divergence of the roots may be very decided.

When the root is single, both its mesial and distal surfaces are longitudinally grooved, that on the former being the deeper, and there is not unfrequently a slightly marked one on the labial surface.

The pulp cavity in the crown follows the contour of the tooth, having cornua corresponding to the cusps. At the neck the canal is much compressed, especially in the middle, becoming so much so in the grooved root of single-rooted teeth as to be practically two canals united by a mere fissure.

The description of the second differs in a few points. In it the labial and lingual surfaces are nearly equal, the former is less V shaped, the depressions on each side of the labial ridge are almost obsolete, and the root is more frequently single.

Abnormal forms in these teeth seem rare. I have met with one case in which the first on both sides simulated the first lower, in that the lingual cusp was rudimentary, and was connected with the labial by a well-marked ridge, on each side of which was a slight depression. We have also cases in which the first is a geminated tooth (union with a conoid tooth on its mesial side), three of which I show. I have also met with one case in which a second has assumed the conoid form.*

The second is also very frequently smaller than the first, the difference in some cases being very marked. Both seem to be more liable than other teeth to become more or less rotated during eruption, the second being not unfrequently semi-rotated.

Of the lower premolars we have already very good descriptions, in them as in all the other teeth (the upper premolars alone excepted), the most prominent point of the convexity of the labial

* Since writing this paper I have met with another abnormal form; in it there are on the labial surface, besides the ordinary cusp, two others, one on each side springing from about the middle of the surface.

surface is towards the mesial side, to which also the labial cusp points, and their lingual surface is much less convex than the labial, just the reverse of the uppers (this also applies to the molars).

They have almost always single roots, but we occasionally meet with some having two, which are labial and lingual, as in the uppers (in the simiadae, where two is the normal number, they are mesial and distal, as in the molars). Abnormal forms seem rarer than even in the upper. I have met with the first, a geminated tooth (two firsts) and also cases in which firsts and seconds were very much flattened, the mesiodistal diameter being much the largest.

A form of the second, in which the lingual cusp is divided by a notch into two sub-equal cusps, is extremely common.

The extreme convexity longitudinally of the labial surface in the first (the cusp being almost over the centre of the tooth) is much more strongly marked in the anthropoid apes, and I think can be traced to the very peculiar form seen in the macaques and baboons, in which a large surface is opposed to the formidable upper canine.

The premolars present in man are usually given as representing the third and fourth of the typical placental mammalian dentition, but I am much more inclined to regard them as the second and third, for the following reasons:—

In those mammals in which we have the typical number, the first is usually more or less rudimentary in form, and almost, if not quite, invariably has had no deciduous predecessor. It is this tooth which I consider represented in man by the conoid portion of a geminated first.

In the few cases on record of a normally formed supernumerary premolar in the human dental arch, it is to the distal side of the normal second, and in the only case I have met with (lower jaw) that on the one side erupted after the extraction of the first molar, while that on the other side only did so after the removal of both the first and second molars. I am inclined to consider those rudimentary, and almost conoid teeth, which we not unfrequently meet with in the upper jaw, to the buccal side of the normal series, as supernumerary premolars (the fourth typical), we have them between the second premolar and second molar, between the first and second, and even between the second and third. They also occur as conoid teeth geminated with the first molar (on their buccal surface).

The tendency to dwarfing in the second, and its being occasionally conoid, also point to the same conclusion.

In the platyrrhine monkeys, where three premolars are normally present, the first differs in form from the other two, which are alike, and as they have three molars in their temporary dentition, I regard their successors, the premolars, as the second, third, and fourth of the typical dentition.

I may notice in passing that the teeth generally in these apes are much more human in form than those in the old-world monkeys, the anthropoids excepted.

Those members who take a special interest in this subject will have remarked that I have made no reference to the extraordinary case recorded (with illustration) in the Association Journal for March, 1886, in which there are six premolars, all well formed, on the one side, the normal number being on the other. My reason for doing so is that there are so many points in which it is abnormal, and so little is known of its history, that I could not venture to draw any deductions from it.

As regards the number, it is just double of any other case I know of on record. Even when we include the lower mammals, very few cases are recorded of five premolars on one side. Owen figures one in an Indian boar,* another is figured by De Blainville in one of the long-muzzled Canidae,† and I exhibited another in an Australian dingo to this Society last session, but these are all in species in which four is the normal number, not two, as in man, and the supernumerary is only a duplicature of the first, the most rudimentary of the series, and having no temporary predecessor. In this case none are rudimentary.

As I have already remarked, unfortunately little is known of the history of the case. Nothing in reference either to the number and position of the temporary molars or order of eruption of the premolars and first molar.

Supposing there was no excess of temporary molars, and that their arrangement was normal, the germs of the two extra premolars, which are *in* the arch, must have been developed and in possession of the space belonging to the first permanent molar at a very early period—a state of matters which would most likely have involved their eruption in advance of the molar. Again, as

* Odontography, Plate 141, Fig. 3.

† C. Tomes' Manual, 2nd ed., p. 386.

there was no abnormality in the lower teeth, one would have liked to learn how these articulated with the upper.

The case is stated to have been complicated by cleft palate, but judging from the illustration, one would hardly have thought so.

In conclusion, I will only add that I sincerely trust the time is now past when such a case, or any approaching it, will be allowed by any dental surgeon to lie unrecorded for years, as this one was.

HOSPITAL REPORTS AND CASES IN PRACTICE.

Notes on the Effects of Cocaine.

By WALTER TOTHILL, L.D.S.Eng.

It is with the object of eliciting views of other gentlemen who may have had any experience with the hypodermic injection of this drug, that I send notes of six cases that I have met with in my practice.

Case 1.—A girl, aged twelve years: extraction of first lower right molar. One grain of the hydrochlorate was dissolved in warm water, half of which was injected on the buccal, and half on the lingual surfaces, at points corresponding to about one-third the length of the fangs away from the apex. Six minutes were allowed to elapse after the injection before extraction, and at this time the child showed slight constitutional effects, but there was only slight pain experienced, as I could tell both by the expression of the face and also by questioning the child after she recovered, but there was a considerable amount of stupor and vomiting; the latter appeared to relieve her, and in about ten minutes after extraction she was well enough to leave the premises.

Cases 2 and 3.—Robust young women, both requiring extraction of upper molars. The cocaine was used in a similar quantity and method to the preceding case. In each case there was slight pain and stupor. No. 2, who had on a previous occasion taken nitrous oxide gas for a similar operation, said she much preferred the latter to the cocaine.

Case 4 was a case of an anæmic servant girl at a hospital at Lewisham, of which I am dental surgeon. I injected her with one grain in a similar manner, and at the end of ten minutes—at which time she began to show signs of constitutional disturbance—the tooth was extracted; she lost consciousness, and

remained in this state, as I was afterwards told by a surgeon of the hospital, for two hours and a half, every effort to bring her round being fruitless ; the effects he attributed to the cocaine.

Case 5 was an old man injected at the same time as the above, being an in-patient, and suffering from supposed epithelioma. No pain was felt and no constitutional results.

Case 6.—A gentleman, aged twenty-seven, for extraction of upper central, which I had proposed replanting. Half a grain was injected, but on the slight pain caused by forcing the fluid from the syringe he made a sudden movement of the head, causing displacement of the needle point, whether any of the contents of the syringe found its way into the stomach I cannot say for certain, although amadou was placed over the puncture as quickly as possible, a piece of which I always held in my left hand to cover the puncture as soon as the needle was withdrawn. However, within a minute he would have rolled out of the chair had I not held him, and he became so violent that it was as much as I could do to hold him down. I noticed that his pupils were enormously dilated, and when he became quieter, which was within five minutes, I found that his pulse was giving six beats to his one inhalation, countenance pale with dark blue lines round his eyes and mouth ; he soon vomited and became better, and was, after lying down for a short time, able to leave. I should suggest that as the cocaine had such a sudden effect in this case that possibly a small blood-vessel was punctured, the contents of the syringe being driven into it. I have seen a somewhat similar effect caused by a gentleman who was in the habit of injecting himself with morphia when a vessel had been pierced.

In comparing these few cases with the long list appearing in our Journal of cases injected by Mons. G. Viau, it would appear that I have been particularly unfortunate in the selection of my cases, or is it that the combination of carbolised solution has a counter-acting effect on the cocaine ? He injects five centigrams or five-sevenths of a grain, but it will be seen that although in four of the above cases one grain was injected yet in case No. 6 not more than half a grain was used.

A List of Cases of Anæsthesia obtained by injecting a mixed Solution of Cocaine and Carbolic Acid.

BY GEORGE VIAU. (*Concluded from page 155.*)

No.		Observations.	
40	I	on account of our uni- ness that we dared apply ied to a patient for a long ffering from lymphad- nd extremely anæmic ; less the success was com-	
41	I	force necessary for ex- The root, abnormally ; doubly curved jection on labial surface, he usual dose found suffi-	
42	I	cient, the child was very frightened	
43	Id.	... Mdlle. Haguemont... 32	... None
44	Id.	... Mme. P. ... 56	... None
45	Oct. 14, 1886	... M. Duluc ... 55	... None
		Extremely nervous	Root of upper central, alveolar root
		Good constitution.	abscess, fistulous opening
		Plethoric	Root of upper central, cyst ... 1 root
		Id.	Root of upper left canine ... 1 root
		Opening enlarged and the cavity of cyst well washed with iodine lotions	Operation performed at clinic of Dental School. Clinic Book,

at clinic of
linic Book,

at clinic of
linic Book,

48 Id.	...	Mlle. Pickard	... 13	Good constitution	Lower first molar right	... 2 roots	...	None	Operation performed at clinic of Dental School. Clinic Book, obs. No. 10,026
49 Id.	...	Mlle. Bill...	... 26	...	Root of upper second bicuspid left	1 root	...	None	
50 Id.	...	M. G.	... 15	Good constitution	Lower first molar left, of excessive size	Roots 2 roots	...	None	Great force required to loosen this tooth. Hemorrhage lasted a good while and the young patient felt faint for 10 minutes after. No general troubles
51 Id.	...	Mlle. Pic...	... 12	A very nervous and impressionable child	Lower first molar left, no crown, commencement of swelling	no 2 roots	...	None	The patient seen the following day
52 Id.	...	M. V.	... 24	Bilious	Two roots of lower second molar left, huge swelling	2 roots	...	None	perceived no other sensation than the traction exercised on the jaw
53 Oct. 15, 1886	...	M. B. (Student of the Dental School at Paris)	... 25	Good constitution	(i.) Roots of two left upper bicuspid (ii.) Three roots of first upper molar left (iii.) One root of second upper molar right	upper 6 roots	...	None	The patient seen the following day, when the swelling had greatly decreased in size
54 Id.	...	Mme. C. G.	... 25	Good constitution, nervous	Lower wisdom left	... 2 roots	...	None	This patient was anaesthetised twice in 10 minutes, that is to say he absorbed 10 centigr. of cocaine in 1 gramme of the carbolic solution. Complete insensibility. No after trouble
55 Id.	...	M. H. B.	... 38	Rheumatic arthritis	Wisdom tooth badly erupted, caries at neck	1 bifurcated root	...	None	The wife of a distinguished colleague. Many times since the operation she has expressed her satisfaction at having experienced no pain
56 Oct. 16, 1886	...	Mlle. Vausloen	... 12	Good constitution	Upper temporary molars left, not loose	...	...	None	Second Perfect
57 Id.	...	Mlle. Diebolt	... 20	Extreme anaemia, sequence of typhoid fever	Root of upper second bicuspid right, alveolar abscess, swelling, violent pain	1 root	...	None	Patient seen the following day, the swelling had increased. No pain since the injections

70 Id.	...	Mme. S. de S.	...	8	Nervous, pusillanimous	Lower temporary canine right, not loose	1 root	...	None	...	None	Only half a dose injected. The child made no noise, although considerable force was necessary Second operation (<i>vide</i> No. 68)
71 Oct. 23, 1886	...	Mdlle. D.	...	39	Rheumatic arthritis	Root of upper central left, alveolar abscess	1 root	...	None	...	None	
72 Id.	...	M. G.	...	37	Good constitution	Lower second bicuspid and one root of lower first molar left	2 roots	...	None	...	None	Only one anaesthesia injection in inter-dental space. No pain
73 Oct. 25, 1886	...	Mdlle. A.	...	26	Rheumatic symptoms present of osteo-periostitis	Upper second bicuspid left, crown gone	1 root	...	None	...	None	
74 Oct. 27, 1886	...	M. Sauchoz	...	13	Good constitution	Lower first molar right, alveolar abscess, swelling	2 roots	...	None	...	None	
75 Oct. 28, 1886	...	Mdlle. Ph.	...	11½	Id...	Lower first molar left, crown gone (6 year old molar)	2 roots	...	None	...	None	
76 Oct. 29, 1886	...	Mdlle. F. de L.	...	9	Good constitution	Lower temporary canine left, not loosened	1 root	...	None	...	None	Only half the full dose injected on outer side only. Nevertheless anaesthesia complete
77 Oct. 30, 1886	...	M. A. P.	...	27	Good constitution, alcoholism	First upper bicuspid right, bifid root, periosteal cyst	2 roots	...	None	...	None	
78 Id.	...	Mdlle. de N.	...	...	Chlorosis	Root of upper lateral right, small swelling, pain for several days previously	1 root	...	None	...	None	The swelling had considerably enlarged on the following day. Pain had completely disappeared since the operation
79 Id.	...	Mdlle. Langlois	...	14	Nervous	Upper left lateral, carious in 4th degree, canine erupting in palate and has no room to come into place	1 root	...	None	...	None	
80 Nov. 2, 1886	...	Mdlle. G.	...	27	Good constitution	Upper first bicuspid left, crown gone, periostitis, alveolar abscess	1 bifid root	...	None	...	None	
81 Id.	...	Mdlle. D.	...	39	Rheumatic arthritis	Upper central right, acute periostitis	1 root	...	None	...	None	Third operation (<i>vide</i> Nos. 68 & 71.) Neither pain nor after trouble

No.	Date of Operation.	Name.	Age	Temperament.		Number of Extractions.	Pain during Operation.	After trouble.	Observations.
82	Id. ...	Mdlle. de M.	... 10	Progressive an- mia		3 roots ...	None	None	Child so pusillanimous as to permit the two A certa was even wasted. The patient, however, affirmed that the operation was quite painless
83	Nov. 3, 1886	Mme. B.	... 60	Strong constitution	Two roots of the lower left wisdom	2 roots divided	None	None	
84	Id. ...	Mdlle. B. (daughter of the last patient)	32	Rheumatic and an- emic	Lower wisdom left, decayed at neck, periostitis	2 roots	None	None	This patient was so terribly nervous that her mother had to submit to an operation to reassure her. Perfect success
85	Id. ...	M. Sauchoz	... 13	Good constitution	Lower first molar left, alveolar abscess (6 year old molar)	2 roots	None	None	Second operation (<i>vide</i> No. 74)
86	Nov. 4, 1886	M. Sauchoz	... 13	Id...	Upper first molar left, caries of	3 roots	None	None	Third operation (<i>vide</i> Nos. 74 & 85)

Operations at the Dental Hospitals.

STATEMENT of operations performed at the London Dental Hospital, Leicester Square, during the months of February and March, 1887.

				Feb.	Mar.
Number of patients attended	...	...	...	2863	—
Extractions :					
Children under 14	...	...	...	353	930
Adults	...	...	...	834	930
Under Nitrous Oxide	...	...	...	634	659
Gold Fillings	...	...	...	507	493
Other Fillings	...	...	...	1109	1210
Advice, Scaling and Dressings	...	...	...	198	797
Irregularities	...	...	...	159	179
Miscellaneous and Dressings	...	...	...	574	—
Total	...	...	...	4368	4698

STATEMENT of operations performed at the National Dental Hospital, during the months of February and March, 1887.

				Feb.	Mar.
Number of patients attended	...	...	...	926	2864
Extractions :					
Children under 14	...	...	...	436	421
Adults	...	...	...	692	673
Under Nitrous Oxide	...	...	...	791	711
Gold Stoppings	...	...	...	161	156
Other Stoppings	...	...	...	648	668
Advice and Scaling	...	...	...	373	540
Irregularities of the Teeth	...	...	...	264	341
Miscellaneous	...	...	...	196	288
Total	...	...	...	3561	3798

STATEMENT of operations performed at the Birmingham Dental Hospital, during the months of February and March, 1887.

				Feb.	Mar.
Number of patients attended	...	...	...	900	954
Extractions :					
Children under 14	...	...	...	—	—
Adults	...	...	...	—	830
Under Nitrous Oxide and Ether	...	...	...	27	28
Gold Stoppings	...	...	...	2	—
Other Stoppings	...	...	...	82	87
Advice, Scaling and Temporary Fillings	...	...	...	126	86
Irregularities of the Teeth	...	...	...	9	5
Miscellaneous	...	...	...	72	32
Total	...	...	...	1218	2022

STATEMENT of operations performed at the Victoria Dental Hospital of Manchester during the months of January and February, 1887.

					Jan.		Feb.
Number of Patients attended	...	...	...	...	792	...	861
Extractions :							
Children under 14	...	...	...	...	606	...	635
Adults	...	...	...	...
Under Nitrous Oxide	...	...	...	...	80	...	83
Cocaine	...	...	...	...	—	...	3
Gold Stoppings	...	...	...	...	26	...	29
Other Stoppings	...	...	...	...	45	...	71
Miscellaneous	...	...	...	...	191	...	238
Total	...	...	...	...	948		1059

REPORTS OF SOCIETIES AND OTHER MEETINGS.

The Odontological Society of Great Britain.

THE usual monthly meeting of this Society took place on Monday, the 4th inst., Mr. CHAS. TOMES, F.R.S., President, in the chair.

A suggestion from the Council that Mr. Bland Sutton and Dr. Dudley Buxton should be elected Honorary Members of the Society elicited a general expression of approval.

The Curator again announced several additions to the Comparative Anatomy section of the Museum, including the skull of a young deer in which the teeth and alveoli were extensively affected by disease, and which had been presented by the Zoological Society of London.

Mr. WALTER HARRISON showed a model of an extreme case of double hare lip in a child five weeks old, operated on, with removal of the intermaxillary bones, by Dr. Whittle at the Alexandra Hospital for Children at Brighton.

Mr. PENFOLD showed exact copies of a set of instruments found at Pompeii, and which were preserved in the Museum at Naples, where they were labelled "dental instruments." They did not, however, at all resemble any instruments now used by the profession, and, in Mr. Penfold's opinion, had most probably been used for modelling clay.

Dr. ST. GEORGE ELLIOTT showed a modification of Hodge's

right-angle attachment, which had the advantage of holding the point securely. With the ordinary pattern the point was apt to work loose after a time and would drop out in the mouth.

Mr. ACKERY showed a pair of forceps designed by Mr. Rowney, of Derby, for dividing the roots of lower molars. He also read notes of a case of obscure disease of the upper jaw in a medical student, aged 26, attended by the formation of a succession of abscesses and sinuses in the mouth, abscess in the cheek, salivary fistula, &c. The trouble began in August, 1881, after exposure to cold on board ship, the patient being then pulled down by a very severe attack of pleurisy, and after resisting treatment for five years, was at last cured by the extraction of the first and second left upper molars and careful dressing of the necrosed alveoli with aromatic sulphuric acid.

Mr. C. V. COTTERELL showed models of the mouth of a youth, aged 18, whose teeth were dark yellow in colour and so soft that they could be cut with a knife. He had never had any illness except an attack of dysentery when quite a baby. A paternal uncle had very similar teeth.

Dr. WALKER showed for Mr. Humphreys, of Birmingham, the head of a calf with cleft palate, extending right through the superior maxillary and palate bones, the halves of the lower jaw being also disunited and the tongue bifurcated. The animal was otherwise strong and well made.

Mr. F. NEWLAND PEDLEY, F.R.C.S., then read a paper on "The Pathology of Riggs' Disease" (*Pyorrhæa Alveolaris*). It was always a misfortune when a disease was named after its discoverer, instead of receiving a designation based upon its pathology; for it was almost certain that in course of time the name would be loosely applied, even in cases where the discoverer had published a fairly accurate description of the disease, and how much greater was the liability to confusion when, as in this instance, the man after whom the disease was named had never published any description of it whatever. Dr. Riggs had attributed a certain abnormal condition of the gums, which he recognised as peculiar, to the presence of tartar buried beneath the gum, and for the removal of which he invented a set of instruments; but the name "Riggs' Disease" was now applied by many to a disease of constitutional origin not necessarily associated with salivary calculus.

The name which had more recently been adopted, at all events

by dentists in Europe, that of *Pyorrhœa Alveolaris*, was also not free from objection, since it too was not based upon the pathology of the disease, but merely indicated a symptom. Unfortunately *Pyorrhœa Alveolaris* still lacked a satisfactory pathology, and could only be distinguished from other diseases to which it bears points of resemblance by a description of its salient physical features and naked eye appearances ; eventually he hoped it would be endowed with a name of scientific import.

The local conditions to which the name *Pyorrhœa Alveolaris* had been applied consisted of a deeply congested state of the mucous membrane round the necks of the teeth, from which also it was detached for some distance from the surface. A thick fœtid discharge could often be pressed up from the space between the mucous membrane and the teeth, and communicated a most offensive odour to the breath. After a time the alveoli became absorbed, and the roots of the teeth covered with a layer of hard, green-brown tartar. Ultimately, the disease progressing, the teeth drop out one after another. The amount of pain varies, but is not generally considerable until the periosteum is fully involved.

Various theories had been advanced in explanation of these conditions. The germ theory had of course been invoked, but though the discharge contains peculiar micro-organisms, proof was wanting to show that these were the cause of the disease. A "catarrhal theory" of origin had been advocated in America, based on the fact that the alveolo-dental membrane is continuous in structure with the deeper layer of the mucous membrane. It was suggested that catarrh of the mucous membrane of the mouth might cause sloughing of the alveolo-dental membrane by cutting off the blood supply ; but a serious objection to this was that the chief vascular supply to the lining membrane of the alveolus was not derived from the mucous membrane of the mouth.

The relation of salivary calculus to *Pyorrhœa Alveolaris* was a question of great moment, for in the opinion of many authorities tartar was the origin and essential cause of the complaint. But all dentists frequently saw cases in which the gum and socket had receded as the result of the mechanical irritation of calculus, but without separation of the periosteum from the root of the tooth, and in which simple removal of the tartar and attention to cleanliness arrested the progress of the evil. But great stress was frequently laid on the thin layer of calculus that was found on the roots of the teeth, extending upwards beneath the inflamed perio-

stem and in some cases reaching the very apex of the root. The characters claimed as distinctive of this deposit were that it was nodular and harder than, as well as of a different colour from, ordinary tartar. But it was necessary to take into consideration the circumstances under which it was formed, and the fact that tartar varies greatly in colour under different conditions. Old tartar was often hard and nearly black in colour, and this deposit was protected from disturbance by its position. Its nodular character was attributable to the irregular surface of the alveolus and of the inflamed lining membrane. Moreover in some cases of *Pyorrhœa Alveolaris* no tartar whatever was found on the roots of teeth which were extracted, though it might be suggested that the tartar had been present in these cases, but had been dissolved away again owing to a change in the character and chemical reaction of the teeth.

On the whole, it appeared to him that the evidence in favour of a local origin was insufficient, whilst there seemed to be strong reasons for attributing to the disease a constitutional origin. It was known to occur most frequently in the mouths of patients whose health had been undermined by debilitating influences and bad hygienic conditions. Frequently the disease was seen to attack the opposite sides of the mouth in a symmetrical manner; a fact which it was difficult to explain on the assumption of a local origin. It might also follow the prolonged use of mercury or iodide of potassium, though it was doubtful whether in these cases it should not rather be considered as a result of the disease for which these remedies were taken, and in America it was said to be a common sequel of malarial fever. Young patients recovering from eruptive fevers were sometimes the subject of *Pyorrhœa Alveolaris*, and frequent pregnancies were a not uncommon cause of the disease in women.

The recent researches of Mr. Bland Sutton had established the fact that animals kept in captivity were liable to suffer from premature loss of the teeth with wasting of the alveoli, in fact from a disease closely resembling *Pyorrhœa Alveolaris*; in some of these cases tartar was present, in others it was not. He found also that the young of animals born in captivity were very liable to suffer in this way in conjunction with rickets. These observations strengthened the argument in favour of the constitutional origin of the disease.

Attention had recently been drawn to premature loss of the

teeth in cases of *Tabes Dorsalis*. He had recently examined two patients in the wards of Guy's Hospital in whom this disease was well-marked, but they presented no signs of *Pyorrhœa Alveolaris*, and his opinion was that though *Tabes Dorsalis* might predispose to Riggs' Disease, just as other wasting disease might, there was no direct connection between the two.

But whilst a depressed condition of the system was the most important factor in determining *Pyorrhœa Alveolaris*, local causes certainly favoured its development. In patients who were constitutionally predisposed, the exciting cause of the disease might be very slight, such as the use of a very hard tooth brush or coarse tooth powder; crowding of the teeth also favoured the onset of the disease, and tartar, when present, no doubt acted as an irritant and increased the mischief.

He regretted that he could give no account of the changes which went on in the alveolus during the progress of the disease, for he had not yet had an opportunity of examining a specimen. Dr. Walker had opened a discussion on this subject at the International Medical Congress of 1881, and exhibited a series of specimens; but these could not be considered satisfactory, since the sections which were supposed to represent *Pyorrhœa Alveolaris* were taken from an old dog whose teeth were loosening. Some of the specimens presented to the Society's Museum by Mr. Bland Sutton, of the jaws of animals which had suffered from a disease which appeared to be closely analogous to *Pyorrhœa Alveolaris* in the human subject, were of great interest. The result of a careful examination of one of these gave him the impression that the disease was a form of osteitis extending from the margin of the alveolar process to a point at some little distance beyond the level of the roots of the teeth, and that the destructive process by no means went hand in hand with the deposit of tartar, but could be seen to be going on in places where no tartar was present.

The result of local treatment demonstrated the very refractory nature of the disease; the thorough removal of tartar and the use of astringents and antiseptics gave good results for the time; but relapses were common, and the main attention must be directed to general constitutional treatment.

His conclusion was that *Pyorrhœa Alveolaris* was a disease of constitutional origin occurring in connection with wasting diseases and depressed conditions of the system. The weight of

evidence went to place it in the category of bone diseases ; the exposed position of the alveolar margin, and its intimate relation with organs of such feeble vascularity as the teeth, went far to explain why it was this portion of the alveolus which was first affected, and also the usual arrest by the removal of the affected teeth.

Mr. C. J. BOYD WALLIS then read a translation of a paper on the same subject which had been received from Dr. Magitot of Paris, a corresponding member of the Society.

Dr. MAGITOT described the disease under the name of "Symptomatic Alveolar Arthritis," and his views of its pathology will be better understood if we translate the name he gives it into "Specific Alveolo-dental Periostitis," the term "symptomatic," or specific, being used to distinguish the affection from the *simple* dental periostitis which occurs as the result of advanced caries, &c., and "arthritis" being used to indicate the view that the teeth are really *articulated* with the jaws, and that which we term dental periosteum, is not a membrane but a ligament.

Dr. Magitot agreed with Mr. Pedley in thinking that the causes of the disease should be looked for, not in the local conditions of the mouth and gums, but in a derangement of the general health, though in a certain number of cases the patient's health *appears* to be perfect. It was, in his experience, most common in middle age, from thirty to fifty, and was most frequently met with in persons whose occupations are sedentary. He had also observed an hereditary predisposition to it in certain families. He recognised the influence of debilitating diseases and eruptive fevers, but differed from Mr. Pedley in considering that neither syphilis nor mercurial treatment had any predisposing effect. Of chronic diseases those which were most liable to promote the development of the local affection were albuminuria and diabetes ; the latter especially being almost invariably complicated in its later stages by Riggs' Disease.

At the same time Dr. Magitot considered that the local affection was of a specific and contagious nature, and expressed a confident opinion that further researches would lead to the discovery of a pathogenic micro-organism peculiar to the disease. He referred to some experiments of M. Malassez and Dr. Gallippe as having established the parasitic nature of the disease, and believed he had himself observed cases in which it had been communicated from one individual to another by direct con-

tagion. Under this idea he insisted very strongly on the importance of antiseptics in its treatment, used in conjunction with astringents and caustics. He attached no importance to the presence of tartar, as regards the etiology or pathology of the disease, looking upon the deposit as entirely secondary. Like Mr. Pedley, he appeared to be unable to throw any light on the morbid anatomy, and brought forward no evidence, microscopical or otherwise, in support of his opinion that it is essentially an arthritis (periostitis).

In the discussion which followed Dr. HALE WHITE spoke of the supposed connection between Riggs' Disease and Tabes Dorsalis, and expressed his opinion that there was no closer connection between them than between the former and many other chronic wasting diseases. He agreed with Mr. Pedley as to the close connection between Pyorrhœa Alveolaris and syphilis.

Mr. BLAND SUTTON said he was prepared generally to endorse Mr. Pedley's views. In addition to the chronic wasting diseases mentioned by that gentleman as predisposing to Pyorrhœa Alveolaris, he would mention chronic rheumatoid arthritis and mollities ossium. He thought, however, that further observations were needed before Pyorrhœa Alveolaris could be accurately defined and classed as a distinct disease without risk of the term being used as a cloak for ignorance.

Mr. F. J. BENNETT agreed with Mr. Pedley that Riggs' Disease was due in a great measure to constitutional causes; it was certainly predisposed to by general conditions attended with anæmia and feeble circulation. At the same time he was disposed to consider that it was primarily a disease of local origin, and expressed himself a believer in the catarrhal theory, which he thought the author of the paper had disposed of in a somewhat too summary manner.

Mr. S. J. HUTCHINSON thought Dr. Riggs had deserved the credit of having the disease named after him. For though the disease had been accurately described in the first edition of 'Tomes' dental surgery, Dr. Riggs had been the first to point out that the removal of the free edge of the alveolar boarder had a considerable effect in arresting the progress of the disease. It must be admitted, however, that the profession was still in darkness as to the origin of the disease, and further investigations into its etiology and pathology were greatly needed.

The PRESIDENT said that during his visit to the States he had seen Dr. Riggs carry out his treatment in a good many cases. The edge of the alveolus had already disappeared before the treatment was begun, but Dr. Riggs gouged, and very thoroughly scraped, the bone surrounding the affected teeth. The immediate results of this treatment were certainly very good, but in all the cases he (Mr. Tomes) had been able to follow the progress of, the disease had recurred.

The discussion was continued by Dr. Walker, and by Messrs. Moore, Hern, Field, Cunningham, and Storer Bennett, after which Mr. Pedley replied.

The PRESIDENT, having thanked the authors of the papers and casual communications on behalf of the Society, announced that at the next meeting (May 2nd), a paper on Cocaine and its use in Dental Surgery would be read by Mr. Hern, and closed the proceedings.

Odonto-Chirurgical Society of Scotland.

THE Annual General Meeting of the Society was held in the Rooms, 30, Chambers Street, Edinburgh, on March 11th—the PRESIDENT, Mr. W. Bowman Macleod, L.D.S., in the chair.

After the reading and confirmation of the minutes of the previous meeting, the TREASURER (Mr. M. Macgregor) submitted his Report. This showed a balance, after deduction of expenses, of £112 7s. 0½d., an increase of £15 6s. over the corresponding amount of the previous year.

The CURATOR and LIBRARIAN (Mr. G. W. Watson), in tendering his Report, said he had great pleasure in announcing that Mr. Robert Hepburn, of London, had very generously presented to the Museum the large collection which had been on loan from him for a considerable time past in the Society's Museum, and which included cases containing a series of mineral teeth, with the maker's name attached, from 1815 to 1863; also gum work, blocks of moulds for teeth, old-fashioned instruments, &c., &c. Mr. Watson then read the letter he had received from Mr. Hepburn, which expressed his appreciation of the good work done by the Society, and his best wishes for its continued prosperity.

On the motion of the PRESIDENT, the meeting recorded its sense of gratitude to Mr. Hepburn for his handsome donation,

especially as many of the objects included were unique, and there were many others, duplicates of which were only to be met with in similar museums. The Secretary was desired to communicate their thanks to Mr. Hepburn.

On the motion of Mr. ANDREW WILSON, seconded by Mr. FINLAYSON, the following members were elected office-bearers for the forthcoming session 1887-8: —*President*—W. H. Williamson, M.B., C.M., L.D.S., D.D.S.; *Vice-Presidents*—Malcolm Macgregor, L.D.S., J. Moore Lipscombe, L.D.S.; *Hon. Treasurer*—G. W. Watson, L.D.S.; *Curator and Librarian*—J. Stewart Durward, L.D.S.; *Hon. Secretary*—John S. Amooore, L.D.S.; *Councillors*—James Mackintosh, Esq.; W. Bowman Macleod, L.D.S.; Walter Campbell, L.D.S.; Rees Price, L.D.S.

The PRESIDENT then called upon Mr. Wilson for his paper (see p. 207).

Dr. SMITH said that Mr. Wilson's paper was something new in the literature of dentistry, as in no work he knew of in the English language was there any such admirable description given of the anatomical peculiarities and distinctive characters of the premolars in man. A dissertation upon these teeth was beset with many difficulties. It would be recollected that only one of the four classes of teeth met with in the mammalia was really scientifically defined, and that was the incisors. Shape, number, size, and other matters which were liable to vary and become grounds of dispute, were not maintained as the main definitions distinguishing the incisors, these teeth being always held to be simply the teeth contained in the intermaxillary bones. In man the bicuspid was described as the surviving representative of the premolar teeth figuring in the archetypal formula of the mammals. But even in such formula, what precise characters constituted or were essential to a premolar tooth, was a difficult matter to determine. They were not in every case the successors of the milk molars, as they were in man. They varied in size, and shape and number, as well as in having predecessors, or having successors, and even in their presence, to a considerable extent, throughout the animal kingdom. Even the canine tooth itself—the first or anterior of those in the true maxilla—might sometimes be fairly classed among the premolars, as in those cases where all its typical characters were wanting, and were found in some other class of tooth, such as the incisor, and which occurred in various well-known instances among the lower animals. These remarks had suggested them-

selves on hearing Mr. Wilson's interesting allusions to the variety in certain points of formation and number among these teeth when occurring in various animals, as relating to certain abnormalities in the number of these particular organs, and the multiplication of their fangs occasionally met with in the human subject. Wherever the full number or perfect development of these or other systemic parts throughout any class of animals departed from what appeared to be an established typical formula, it might, according to modern research, be assumed as in all probability due to the influence of what was known as diminished functional activity, or to what was called adaptive modification, leading to survival of the fittest—a natural law exemplified in the case of individual animals where certain structures, whose function had ceased, disappeared; such as in the ductus arteriosus, or thymus gland, after birth; in the atrophy of muscle from disuse; or of the optic nerve, where certain causes have led to blindness.

Mr. WATSON described a lower right wisdom tooth of abnormal shape, which had been extracted at the Hospital, with considerable difficulty, by one of the students. On the coronal portion of the inner margin of the posterior lingual root arose a somewhat longish oval protuberance, projecting backwards and slightly outwards—constricted at its attachment, but swelling out towards its extremity. It was covered by a thick and highly vascular membrane (enamel membrane), the whole being beneath the surface of the gum when the tooth was in position in the mouth. At the base of the protuberance, and somewhat between the normal roots, was situated a third small and somewhat flattened root. He had made a section through the abnormal portion, and used part of it for a micro preparation, from which was taken a photomicrograph. On examination after section, the pulp chamber was found to have passed some distance into the protuberance, which, in fact, was analogous to the crown of the tooth. Of the general appearance of the tooth, the members would be able to judge, from the remains of the tooth, and also from a model of the tooth in its entirety,—and the nature of its histological structure could be better understood by reference to the photomicrograph. The probable physiological explanation of this malformation, was that the germ of a supernumerary tooth had been developed in close approximation to the third molar, with which it eventually coalesced, the small extra root properly belonging to the supernumerary, and the two teeth possessing pulp chambers in common.

Photo-micrographs of osteo-dentine, dentine of repair, &c., were also shown.

Mr. MACLEOD made a short communication on the subject of Cunningham's method of facing hard rubber plates with metal. He said this process has for its object the placing between the palatine surface of vulcanite dentures and the mucous membrane of the mouth a layer of gold, which, being a good conductor of heat, will reduce the tendency to inflammatory action which vulcanite is said to induce. Several attempts have previously been made to line the surface of plates by means of gold leaf, &c., but these have all proved failures, owing to the readiness with which the gold lining scaled from the plate, to say nothing of the difficulty of carving the leaf in a uniform and unbroken surface round isolated teeth and up to the margin of the finished plate. Cunningham's process has none of these defects. Whether it will reduce the liability to congestion or not, it presents an attractive and workmanlike finish, and a surface which is more readily kept clean, and on these two points deserves our present commendation, leaving the more debatable one of avoidance of inflammation to be determined by experience.

Mr. Macleod then illustrated the process on prepared models, and the finished work by specimens made by Cunningham and himself. For a detailed description of the process he referred to the *BRITISH DENTAL ASSOCIATION JOURNAL* of November, 1886. Instructions and liberty to work the method can be had from Mr. Cunningham, 27, Larcom Street, Walworth Street, London, S.E.

Mr. WILSON said that he could not see how any benefit could be derived from the heat-conducting property of the gold lining, as it was covered on its lingual surface by a thick layer of vulcanite, its only free surface being practically the edge exposed at the palatal margin.

Dr. SMITH said he was not quite sure how the conducting power of a metal would be influenced by being coated on one side by vulcanite in a cavity such as the mouth, where the temperature was not always uniform. The metal might act as a conductor of heat in two ways—it might convey heat from the palate, but on taking hot food into the mouth it would act in the opposite manner. This, the vulcanite coating might obviate. As for irritation being caused by vulcanite, it no doubt might occur in exceptional cases, but he had seen very similar irritation occa—

sioned by gold plates, and long ago by the old-fashioned bone sets—in certain patients.

Mr. BROWNLIE said there could be no question about the improved appearance which Mr. Cunningham's process gives to vulcanite work—converting what is, in its best fitting form, an unpleasant-looking surface into a “thing of beauty.” In his opinion its merit ended there, however.

From the notices which had appeared of this process, and the statements made in connection with it from time to time, it appeared to have been devised to cure, and had been thought to cure, a condition with which every practitioner was more or less familiar, but which was not due to wearing vulcanite. He recalled as many cases of the like condition when gold was worn as when vulcanite was the base. Want of cleanliness explained much of it, but not all. In some cases it must be looked upon as a condition peculiar to the individual aggravated by continuous wear and a close fit.

A NEW HYDRAULIC MOTOR FOR THE DENTAL ENGINE.

Mr. WALTER CAMPBELL read the following communication: It is now thirteen years since I had the pleasure of bringing the dental engine before this Society. This engine does not now require commendation—it is in the surgery of every dentist worthy of the name. At the Society's meeting I have referred to, held in March, 1874, I then said, with reference to the usefulness of the dental engine: “All that is now wanting is the adaptation of water as a motor power, to make this the most useful mechanical appliance ever given to the dental profession.” Since then I have been constantly on the outlook for a suitable motor to drive the dental engine. At one time I had great hopes of the turbine water motor, but I soon found it was not at all suitable for our purpose. It is admirable where a steady speed is required, and when it is not necessary to be frequently stopped. For intermittent work it is not suited, on account of the time required to get up its speed, and also the time required to stop it. For variable work it is not suitable. Either at greater or less speed than it is calculated for it wastes water. For high pressures and small powers it has to be made so small, and the speed has to be so great, that it is almost impossible to make it satisfactory for our work, which is both intermittent and variable.

Some years ago I availed myself of the electric motor to drive my engine, but it was not a success ; it was, in my hands, unreliable, and required more attention than I cared to give it ; had I been an electrician I might have had the electric motor more under my control. The bumming noise of the dynamo was besides objectionable.

I have inquired as to the merits of the gas and hot-air engines with the view of ascertaining whether one or other could be made small enough, and be suitable for our work, and the result of these inquiries has not been encouraging. Neither the gas nor the hot-air engine is very suitable for intermittent work, on account of the difficulty of starting ; the heat, smell, and noise, though minor, are also drawbacks to their use in practice.

It was at the Exhibition held in this city last year that I first saw the hydraulic engine, which I have the pleasure of bringing before you to-day. On seeing it at work it at once occurred to me that it could be made available for our purposes. Accordingly, I ordered one from the inventor, Mr. Hastie of Greenock, and, after a good deal of planning and perseverance on my part, I think I have at last succeeded in making this motor all that can be desired for dental work. I have no hesitation in saying that, with the new joint in the upright shaft, and other new arrangements in the dental engine, we have the most perfect combination of motor and dental engine of which I am aware. This joint in the upright shaft is a most valuable all-round movement, and gives an increased length (when required) of seven inches to the flexible arm. With this additional range of movement I do not now see anything further to be desired. The only difference of opinion which might arise, as Mr. Brownlie, who came to Dundee to see it at work, remarked, would be as to the position for fixing the upright shaft. I have the upright shaft of my engine fixed at the left side of the chair (Morrison), about one inch from the left claw (or foot). Before finally fixing it here I tried different positions with the ordinary foot-treadle, but found this the most satisfactory. I had the engine fixed in its present position, before I had thought of the new joint. I found it, however, in consequence of the fixed position, occasionally inconvenient. But since I have got this joint, as you now see it (and it has passed through several stages of development) the hand-piece can be brought to any position. •

This hydraulic engine, as you will see from the diagrams, is

worked by two oscillating cylinders, and is specially suited for high pressures and intermittent work. Up to a certain limit it can go at any speed, and it can be started or stopped almost instantaneously. It can be adapted to any pressure by using a counter-shaft to suit the position and adapting the patent adjustable stroke, which is a feature in Mr. Hastie's engine. In this way the consumption of water is exactly in proportion to the work done.

Where conservative dentistry is practised, a motor for the dental engine will become, indeed has already become, as great a necessity as the engine itself. I have been working my engine with this motor for more than three months, except when making any alterations on the new joint, and then I felt the want of it.

The advantages of a suitable motor for the dental engine were well expressed in a paper read by Dr. Teague "On Personal Hygiene," read at a meeting of the Southern Dental Association, America, and reported in the *Cosmos* for October last, in which he said :—

"Prophylactic measures should be employed to ward off ailments—arm rests to support the uplifted arm, and prevent nervous tension and overwork of the heart: operating stools to secure a sitting posture whenever possible, thus avoiding bending of the body and hanging of the head, from which deleterious habits result lung troubles, intercostal, neuralgia, and vertigo: to say nothing of hæmorrhoids and varicose veins, which result from habitual standing.

"The dental engine should be worked by some power other than the foot, otherwise one leg is in time rendered almost powerless by non-exertion, and the other is injured by overwork."

It is many years since I acquired the habit of sitting while operating, especially when filling; and with the motor, preparations of cavities may also be done with great ease sitting.

I have the knob, for regulating the movements of the engine, where the toe of my right foot would naturally rest—viz., in a line between the two feet of the chair, on the right side, and eight inches behind the front foot. These diagrams will give you an idea of the relative position of the several parts.

In showing you the different parts, I regret my inability to show them working. I can only add, with reference to its efficiency, that although it looks like a toy, I have more power than I require, and that it is under perfect control, going fast or slow, starting or stopping in an instant, and *always ready*.

The original cost is not great, and the cost of running the engine a mere trifle. The Water Company fitted a meter to my engine, and left it there for three months, to ascertain how much water it was likely to use. At the end of the three months, the index registered something less than two thousand gallons. The meter is now removed, and I am to be charged twenty-one shillings a year.

A gentleman in this town has the same engine fitted up to drive a small turning lathe, and is to be charged at the same rate. This may be a guide for any Water Company as to the charge for water, to drive this small engine for dental purposes.

Messrs. Brownlie and Macleod, who came to Dundee to see the engine at work, will, I have no doubt, tell you what they think of it.

The motor and dental engine arrangements, will, I expect, soon be in the hands of Messrs. Ash.

The PRESIDENT said that, representing the Odonto-Chirurgical Society, he had paid a visit to Mr. Campbell's surgery, so that he might see and test the motor at work, and report to the Society. He had very great pleasure in being able to report that the arrangement of motor and burring-engine had all the good qualities claimed for them by their inventors—viz., simplicity in construction, efficiency in action, steadiness and silence in working, perfection of control, moderate cost in installation, and economy in use. The power at disposal was much more than should ever be required in dental work, and could be regulated at will, while the installation was so adaptable to every circumstance of space and other local circumstances as to make it easily available in any operating room where the requisite water pressure could be obtained.

Mr. BROWNLIE said he could not speak from experience with this motor, but from the opportunity kindly afforded him by Mr. Campbell of seeing his, he would say that it appeals very strongly to one's sense of fitness. It is simple and compact, and can be placed anywhere convenient. It is instant in starting, and works at once to its full power. It stops the moment the water is cut off. There is simply nothing to do preparatory but to put one's foot on the button, and at any moment in the twenty-four hours it instantly responds. There is no lamp to light, no temperature to get up, and no battery to vex one.

There is but one objectionable feature, and which only some

operators will object to. It fixes the dental engine to one spot on the floor. He did not mean that it so limits one's use of the engine. Mr. Campbell's adjustment shews that the engine can be used as freely as before, only it cannot be moved away from the chair when not in use.

In this respect he hoped and believed in the possibility of still further progress. The motor itself leaves nothing to be desired, and he believed was destined to take an important part in dental operations, wherever there is a domestic water supply available.

A communication was read from Mr. Whitehouse, London, describing a composition for duplicating models.

The PRESIDENT then delivered the following short valedictory address :—

In vacating the chair of this Society, I may be allowed to express the pleasure which its occupancy has afforded me, and to thank the office-bearers and members for the hearty and consistent support which they have afforded me. Although nothing very startling has occurred in our history during the past two years, its existence has been marked by a steady maintenance of healthy interest amongst its members, and the addition of many minor contributions to histological, pathological, therapeutical, and mechanical departments of our science, which, if they have not inaugurated a revolution in our practice, have materially assisted in the development of professional perfection.

We began the term of my office by a most interesting and well thought out paper on the "Missing Incisors in Man," by Dr. Edwards of Madrid, which afforded ample scope for divergence of opinion, and led to a most friendly and instructive discussion. This was followed by "Illustrations of the Pathology and Physiology of the Teeth," by Mr. Watson ; and at our next meeting we had a practical paper demonstrating the simplicity and effectiveness of Dr. Coffin's method of regulating the teeth by means of piano wire. At our next session we had a conversational meeting devoted to the "Treatment of Carious Teeth in Children," the leading part in which was taken by Mr. MacGregor, our senior vice-president elect, and our first year was closed by a most exhaustive paper on the "Mucous Membrane of the Mouth," by Mr. E. A. Cormack.

This year we opened with a masterly paper by Dr. Symington on "The Position and Relation of the Teeth in Children," in which he gave us the results of original observation in sections of

the head made while the cadaver was frozen. The vexed and still unsettled question of "Pyorrhœa Alveolaris et Etiology, Pathology, and Cure" next engaged our attention, and more recently an admirable treatise on "Alveolar Hæmorrhage," by Mr. Nicol, of Leeds, evoked expression of experience and opinion which was deemed so valuable by our Southern contemporaries that special attention was called to the transaction on its republication in the pages of the Association Journal. This brief catalogue of our more formal and prepared transactions gives, however, but a very meagre idea of the quantity or value of our business. Night after night cases in practice and abnormal specimens of dentition and methods of treatment, and mechanical appliances, were brought before the Society, and yielded a rich harvest of technical knowledge; and to-day we close the present session by a series of contributions and communications which I think the most distant member must admit has well repaid the dangers, the expenses, and discomfort incident to travel at this uncertain-weather period of the year.

Before we meet again as a society, and before my esteemed friend and successor in this office—whose absence to-day through a serious illness, from which I am happy to say he is steadily though slowly recovering, somewhat mars the pleasure and completeness of our meeting—takes the chair, there will have been held in Washington City, U.S., the third International Medical Congress.

To the Dental Section of that Congress we may look forward with the fond anticipation that, affording as it will an opportunity for the leading minds of the profession in all countries to contribute their theories and their facts to the general stock of our knowledge, we shall meet together with our intellects refreshed, and find in the proceedings of that World's Congress matter on which to sharpen our wits, and strong food upon which we may chew the cud of reflection, and it may be assimilate for our own and our clients' good during the monthly gatherings of session 1887-88.

The Annual Odonto-Chirurgical Society and L.D.S. Dinner.

THE Annual Odonto-Chirurgical Society and L.D.S. dinner was held on the evening of March 11th, in the Balmoral Hotel, Edinburgh, W. H. WAITE in the chair, with Mr. BIGGS, of Glasgow, acting as croupier. After the statutory toasts had been duly honoured, Dr. WAITE rose and proposed the dental diploma. He said :—

GENTLEMEN,—We come now to a toast which forms a kind of dental *piece de resistance*, and before introducing it to you I will take the opportunity of thanking your management Committee for their kindness in doing honour to a comparative stranger by placing me in the chair this evening. I do not know if anyone has ever done so before, but I wish to congratulate you on the name of your society. I am glad you have preserved the old classic form ; it is not euphonious, but it is strictly appropriate. The name becomes the profession, and your Society has proved itself worthy of the name.

Referring to the advances of the past half century, it may safely be said that in no department has progress been more real and substantial than in the science and art of dental surgery. Fifty years ago the name of “dentist” was scarcely known outside the largest centres of population, the practice of dentistry was little more than mechanical—facilities of instruction or improvement there were none—instruments, materials and appliances were all of the crudest and scantiest—opportunities of intercourse did not exist, and were not generally desired. “It is only since the year 1835 (says Prof. Oliver Wendell Holmes) that the anatomy of the teeth, out of which arose new views of their physiology and pathology can be said to have been understood. An article in the *British and Foreign Medical Review* for the year 1839, brought before the profession in England and America a series of discoveries which changed the whole aspect of dental anatomy.” The same writer further states “The value of the teeth to human beings is so prodigious, that as soon as attention was fairly turned to their proper management, and the repairing of their loss, inventive talent precipitated itself, so to speak, upon this new department of industry.” From that period there has been no cessation of progress until the present time. Now, the name of “dentist” or “dental surgeon” is familiar in every small town and even in villages. The practice of dental surgery can no longer be regarded as any-

thing less than a most important division of the healing art. Facilities of instruction abound, dental education is at least as complete to-day as that required for any other profession, comprehending a sub-stratum of general knowledge, a thorough training in mechanics, together with a careful study of normal physiological relations, and a fertile resource in dealing with abnormal pathological conditions. As to instruments, appliances, &c., their name is legion; the onus of choice now bewilders as much as the scarcity once perplexed the practitioner, opportunities of intercourse are increasing year by year, stimulus is offered to private study, chastening influences favour careful investigation, while encouraging promise is assured to every patient worker in the great mine of truth. True, difficulties and discouragements still exist, public appreciation has hardly kept pace with our own renewal—perhaps it rarely does—but now that education has become compulsory, the future prospect of the dental surgeon is decidedly hopeful. The time is coming on apace when every practitioner will be educated and qualified, many who are now beginning will realise the fruition of all these improvements.

Well, gentlemen, the dental diploma has attained its present position through self-denying and unwearied effort. We have had wise, brave and energetic leaders—we have many of them with us still—we loyally acknowledge our indebtedness to them—we rejoice with them, and for them in the triumphant issue of their long cherished hopes. Let those who come after, amid vastly superior conditions, emulate their example. It is with peculiar gratification that I announce to you the receipt of a telegram conveying a favourable report concerning Sir John Tomes. Some of you are aware he has been in a very critical condition, and you will all rejoice to hear of his progress towards recovery. We have come to regard Sir John Tomes as the father of our profession, and we cherish towards him very warm feelings of filial confidence and respect.

In our experience educational reform has been accompanied with other advantages. It may be doubted whether there exists in any profession a better state of feeling than that which is growing up amongst us. A great moral change is being effected—we are gladly conscious of it—social reform is abolishing jealousy and isolation—we now rejoice to meet together and enjoy each other's society after the manner prescribed by an ecclesiastical authority.

It is reported of one of the English bishops that in a recent

address to his clergy, he exhorted them after this fashion:—
“Brethren, let me advise you to dine together, to dine often together, and when you dine together be sure that you dine well.”

In a short appropriate speech Dr. BLAIR CUNYNGHAME proposed the Odonto-Chirurgical and sister Societies.

In replying, Mr. J. MOORE LIPSCOMB (Vice-President) said: It is a matter of great regret to us all that our new President, Dr. W. H. Williamson cannot be with us this evening, owing to a recent illness from which he is only now recovering. It is needless for me here to refer to the good work done by our Society in the past, or to its continued effort to maintain the honourable position it has hitherto held, it still possesses a goodly number of hard working, energetic members always ready to impart to the brother practitioners any knowledge that might be of value. In the past session there have been many interesting papers and communications brought forward, and as long as these continued the subjects of which they treated were thoroughly thrashed out and discussed, there need be no apprehension as to the Society's future; and we owe not a little to the kindly co-operation of the medical fraternity, who by their presence with us this evening, and on similar former occasions, show their appreciation of our endeavour to maintain and heighten the position of our branch of the one great body to which they all owe allegiance.

Mr. J. R. BROWNLIE said he rose to propose the toast of the “Medical Authorities.” A comprehensive title, but a very select toast, and calling for some discrimination, for there are authorities and authorities. There are those whom we delight to honour, and there are those whom we will be delighted to honour whenever they give us a reasonable occasion of so doing.

Passing over a large class of medical authorities not yet known to fame, we come to a small class of whose existence we might yet have been ignorant but for the literary efforts of a section of the profession, best known as “guinea jaw men.” Gentlemen, such medical authorities are not included in my toast.

Then we have another class, whose acquaintance we have made for the most part through their books. In this class we enumerate some very high authorities, in some cases the very highest. But I must ask you to distinguish between books written with the pen for a good and righteous purpose and books owing their origin more to the shears, and compiled for no very high or philanthropic motive. You will be careful, gentlemen, to discriminate here.

But there is still another set of medical authorities whom I believe this toast is more especially intended to honour, medical authorities to whom we have now the right to claim some sort of relationship, and who have not been slow to recognise this relationship by their effort on our behalf, especially in respect of the due training and welfare of our students. I mean of course the Medical Corporations.

It is with pleasure, gentlemen, we recognise in our midst to-night the representatives of two medical authorities which have attained to a world-wide reputation, the Royal Colleges of Surgeons and of Physicians. In Sir Douglas McLagan and in Dr. Argyle Robertson these Colleges are represented by members of the medical profession, whose attainments in their respective departments are calculated to add an additional lustre to any institution over which they may be called to preside.

Let me express the hope—rather the conviction—that the day is far distant when the members of our profession can meet, as we do now, and fail to include and do all honour to the toast of the medical authorities, coupled on this occasion with the names of our esteemed guests, Sir Douglas MacLagan and Dr. Argyll Robertson.

The toast was acknowledged by Sir DOUGLAS MACLAGAN and Dr. ARGYLL ROBERTSON, the presidents of the Royal College of Physicians and Surgeons, respectively.

The toasts were interspersed with songs, rendering the evening less formal and far more pleasant.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Dentists and Disease.

IN the February number of Dr. Harlan's *Dental Review*, which is one of the very best Dental Journals going, is an article by Dr. Koch, of Chicago, the greater part of which we propose to quote for the benefit of those of our readers who do not see the Review. Dr. Koch had been glancing over the statistics, medical and general, of the Provost Marshall General's Bureau which contained compilations from the records of medical examinations of all sorts of people during the civil war, with the result that he eliminated certain curious and interesting facts concerning the health of various sections of the community. He discovers

pages of “stern, cold and convincing argument” to prove that learning is a dangerous thing, the more dangerous the deeper we drink of it. The most interesting matter was unearthed from the charts and tables which recorded the rejections of recruits for physical disability. The men were divided into four principal groups :—

	Classes.	Men.
Professions... ..	11	7,576
Mercantile pursuits	9	18,818
Skilled labour	38	75,761
Unskilled	18	232,166

While the average rejection was 367 per thousand, it was 520 in the professions, 479 in mercantile pursuits, 434 in skilled and 348 in unskilled labour. We shall quote Dr. Koch’s amusing analysis verbatim.

“The following table shows in what order these four groups ranked, arranged by diseases, No. 1 being the highest number of rejections and No. 4 the lowest :

	All Diseases.	Obesity.	Diseases of Digestive System.	Diseases of Circulatory System.	Disorders of Intellect.	Paralysis.	Diseases of Nervous System.	Phthisis Pulmonalis.	Syphilis.	Chronic Rheumatism.
Professions	1	1	2	1	2	1	1	1	4	1
Mercantile	2	2	1	2	4	2	3	2	2	3
Skilled	3	3	3	3	3	3	4	3	1	4
Unskilled	4	4	4	4	1	4	2	4	3	2

“It will be noticed that in these various classes of diseases the professions are fewest only in one class, and that is syphilis, which is, indeed, something to be proud of. An examination, however, of the annexed table will be found to show another surprising fact. If the absence of this disease is an evidence of purity, and this record is to be accepted as a gauge, then the professions rank in purity as follows : 1st, Editors (no taint whatever) ; 2d, Lawyers ; 3d, Teachers ; 4th, Dentists ; 5th, Students ; 6th, Clergymen ; 7th, Physicians ; 8th, Public Officers ; 9th, Druggists ; 10th, Architects ; 11th, Musicians.

“The table which follows here is compiled from the records, the figures are not carried out into their ultimate fractions, however. It shows the number of rejections for each class of diseases

in the four general groups, and the eleven classes of professions

What a future lies before us ! Although our editorial functions may protect us (we allude to the staff) from the unbecoming *embonpoint* that threatens our less literary *confrères*, conceive the horrors of the accumulated indigestion (the editorial plus the dental), and, as if by the irony of fate, an unimpaired nervous system that will let no pang escape, and the clearest of intellects to appreciate our troubles. Is it not almost enough to make us throw away our books and journals, discontinue our attendance on learned societies, and turn to careless happy unskilled labour ? Truly "where ignorance is bliss 'tis folly to be wise."

NEW INVENTIONS.

De Miel's Perfect Health Biscuits.

WE have received from the International Patents Association a sample of biscuits, which are specially intended to assist in the calcifying processes of the body. The analyst, Dr. A. H. Hassall, finds them to be rich in nitrogenous matter and carbo-hydrates, and to contain those elements most necessary to bone formation. We can testify to their agreeable flavour and excellent baking. As is usual, the pamphlet enclosed claims a little too much virtue for the biscuits. The statement that they "renew enamel when deteriorated by illness, strong medicines, acids, and wear and tear of mastication," should be omitted from the circular in future, as an absurdity of this sort casts discredit upon what is really a very excellent and useful addition to our resources for conveying certain necessary food elements into the system in a simple and agreeable form.

Barth's Gas-bottle Valve and Stand.

WE illustrate a new form of valve for gas bottles introduced by G. Barth and Co., of Poland Street, London, in which the screw spindle being at right angles to the bottle may be placed vertically without the necessity of supporting the latter in an upright position.

Therefore when desirable to control the valve by a foot-key, the bottles (either singly or in pairs with a "double union") may rest horizontally, lowering the key to a position convenient and advantageous for the foot, and dispensing with the more or less top-heavy and cumbersome stand. The valve, as will be seen, is

attached (by screw and nut) to a small tripod plate giving the required stability.

Twin bottles of the smaller size, each holding nitrous oxide expanding to 25 gallons, of steel, only eight inches long, and together weighing not more than seven pounds, make an exceedingly portable combination. Of course the hand key may be used with the bottle in any position, but those employing the foot will particularly appreciate the convenience of the arrangement.

OBITUARY.

John B. Belisario.

WE regret to have to record the death, at the early age of twenty-two, of the son of Dr. Belisario, of Sydney, New South Wales. Mr. Belisario died at Philadelphia, Pa., on February the 11th, of acute nephritis. He was studying dentistry at the University of Pennsylvania, where he had endeared himself to all with whom he had been brought in contact during his short

career. His illness was very short—only a few days—and the news must have come with terrible suddenness to his family. Dr. Belisario, who is so widely known and respected among the profession, will be deeply sympathised with in his bereavement by us all.

ANNOTATIONS.

THE International Medical Congress is fast approaching. By dint of great tact, forbearance, and perseverance, opposition has been convinced and won over and an unanimous determination reigns to make the meeting a triumphant success. We know that strong efforts are being made by the untiring secretaries to render the dental section really international and representative, and we hope a good contingent of English dentists will respond to the cordial invitation extended to them. To those who can arrange to be present we would strongly urge that they should not delay to communicate to Dr. Bogue the nature and extent of anything they propose to contribute to the general fund of information. We have no doubt much quiet labour is going on in the laboratories of various countries, the fruit of which will be laid before the Congress. Among the varied branches and sub-branches of our science and art, there is ample scope for inquirers and demonstrators, and it will be very disappointing if some definite progress is not recorded in many directions. We hope sincerely that the cloud-soaring mystics and language torturers and all those who seek notoriety rather than science will be few and far between. We would also venture to hope that an hour or two may be devoted to the discussion of some points of ethics that sadly need threshing out, and as many of these questions are of an international character an international congress seems the proper place to discuss them.

WE are sure that those of our readers who know Dr. Langmore have felt the deepest sympathy for him in the loss of valuable time and the protracted inconveniences attending his defence of the action brought against him a few months ago by a lunatic patient. Unhappily, medical men are liable to actions of this sort, and for no fault of their own may be dragged into lengthy and expensive legal proceedings. In the present case, although Dr. Langmore was awarded his costs he has been unable to obtain them, and was absolutely £250 out of pocket, to say nothing of loss of

professional time. Under these circumstances we are heartily glad to hear that the case has been taken up by the Council of the Metropolitan Counties Branch of the British Medical Association, under whose auspices a fund is being raised to assist in defraying these heavy expenses ; and we feel sure that it will be a grateful compliment to our former editor if the names of some of his quondam fellow-workers are found upon the list of subscribers. Subscriptions should be sent to G. Eastes, Esq., M.B., 69, Connaught Street, Hyde Park Square, W.

WE publish elsewhere another contribution from Professor Wilson, of Edinburgh, on that department of dental anatomy which concerns itself with the morphology of human teeth. Mr. Wilson is already an authority upon the subject by virtue of his paper on the "lost incisors," in which he supported the views of Albrecht and Turner, and his present statement which deals with the premolars will be attentively read by anatomists. We greatly regret that the readers of this Journal will not have the advantage of seeing the illustrative diagrams and models which of course helped to make good Mr. Wilson's case ; without them the contention that it is Prm.₃, Prm.₄, that have disappeared, and not as we have hitherto believed Prm.₁, and Prm.₂, is scarcely made out. His theory is certain to be attacked, and we may anticipate a discussion, in the course of which many additions to our stock of knowledge may accrue to us. In the meantime we think Mr. Wilson's careful scholarly and original paper deserves the highest praise.

THE question of morphology reminds us of an excellent handbook in the science series, "Mammalia," by Oscar Schmidt, in which those who take an interest in such questions will find much interesting information. The author discusses not only the losses the human series has already sustained, but shows that the process is going on now, and that in all probability not only the third molars but the lateral incisors are doomed. The infinitely slow and yet unceasing series of changes by which evolution is ever rendering animals fitter for their surrounding circumstances, is perhaps the most fascinating field for speculative science, and we do not doubt that papers of the character of Mr. Wilson's will bear fruit by stirring up the spirit of exploration and research in the minds of the younger generation.

WE learn from a contemporary that cocaine has a rival in an alkaloid obtained in Australia from the juice of *Euphorbia Drummondii*, which Dr. John Reid, its discoverer, calls "Drumine." The new local anæsthetic acts almost entirely by paralysing and does not excite.

THE Third Annual Dinner of the Edinburgh Dental Students' Society took place on Friday, the 25th March. Mr. Finlayson, L.D.S., in the chair. There was a capital turn out of past and present students. Several of the lecturers were also present, and contributed to the musical conviviality of the evening. A most fraternal and enjoyable evening was spent.

MR. WILLIAM WILSON, L.D.S., M.B., L.R.C.S., has been appointed to the assistant staff of the Edinburgh Dental Hospital, *vice* J. Durward, promoted.

THE Quarterly Report of the Edinburgh Dental Hospital shows that the total number of patients treated at that institution, from January 1st to March 31st, is 1885. Of these 599 were males and 689 females; 40 cases were treated under anæsthetics, and 557 stoppings were inserted.

It has been suggested by a correspondent that this is the time when local directories are usually being compiled. Members of the Association residing where such directories are published should see the editors at once, and use their influence to have the professional list purged of all names which are not on the Register.

IN our list of office-bearers for the Odonto-Chirurgical Society (see March Journal) we incorrectly described Mr. Williamson as M.B., C.M. His proper title is M.D.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

Medical Registration.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—The accompanying "opinion" with regard to registration is of much importance to those gentlemen who already hold, or will hold before June 1st, a single qualification, and who desire to be on the Medical Register.

After that date, as the law now stands, only those who obtain the

conjoint diploma will be admitted to registration; the M.R.C.S. and L.S.A., for instance, will not do, but only the M.R.C.S. and L.R.C.P., and these only if they are passed at a conjoint examination.

MORTON SMALE.

After 1st June no person can be put on the Medical Register by virtue of a single qualification, such as a diploma in surgery, or a diploma or licence in medicine. Up to 1st June next any person can be put on the Register by virtue of such single qualification, and being once on, he may obtain additional qualifications by subsequent examinations, and such additional qualifications may be added to or substituted for those already on the Register. But after 1st June next no one can be put on the Register who has not passed the qualifying examinations required by the Act of 1886, that is, an examination in Medicine, Surgery, and Midwifery, and these three subjects must be taken up together; hence any one who has now a single qualification, and intends to obtain further qualifications after June 1st, should take care to be on the Register before that date, for if he is not on it his single qualification will not afterwards entitle him to Registration.

W. J. C. MILLER, B.A.,
General Medical Council,
299, Oxford Street.

Fees to Medical Men.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—In your last issue I observe that you treat it as an almost self-evident proposition, that those who practise the specialty of dentistry should not accept fees, at all events for the operative portion of their work, from their medical brethren who may have occasion to avail themselves of their services. As in the nature of things it is likely that the dentists' friends will be found largely amongst his medical neighbours, there will almost always be a certain number from whom, on grounds of friendship, he will feel reluctance in the acceptance of a fee; but is this to be extended to the whole body of medical practitioners? in my opinion, at least, the matter calls for more than passing consideration, now that it has once been mooted, and I propose to briefly examine into the basis upon which the custom, so far as it exists, stands.

At the root of the whole matter lies the idea of reciprocity, that is to say, that it shall not be a one-sided affair, but that each shall render to the other services in some measure equivalent, without reckoning each detail too closely; and if this represented the facts as well as the theory, there would be little more to be said. But when we come to examine into the practical working, we do not find that this reciprocity does exist; unless the dentist is exceptionally unfortunate, his requirements in the way of medical advice will be but small, whereas almost every one needs to visit the dentist many times a year. Aga in

one medical adviser will generally suffice, and the tax upon his time will not be great, whereas the dentist in any practice has many medical men amongst his patients. Furthermore, a visit to the dentist means the expenditure of half-an-hour at least, or more generally an hour; while a visit to a medical man means ten minutes or so, to say nothing of the expenditure of gold, &c., in the one case as against nothing in the other; and hence it comes about that in the case of a dentist in good practice, the medical man is seen to the exclusion of another patient, while in the converse case of a visit to a medical man, it is generally a matter of an addition to his other patients, and not of their exclusion. It is impossible to enter into the case fully within the limits of a letter, but perhaps enough has been said to indicate that the idea of any real reciprocity must be set aside.

It may be said that the medical practitioner has it in his power to make a return for the services given to him, by sending patients to the dentist; well, doubtless in many instances he does so, but there is an unpleasant suggestion about this which is rather hard to put into words, without saying more than is intended; it is perhaps enough to hint that it would be more conducive to the self-respect of both parties that such recommendation should be the outcome of a genuine belief that in making the recommendation he is sending the patient to the best man he knew of, and so serving the patient's best interests, rather than that there should be any suggestion, however indefinite, of the discharge of an obligation at another person's expense.

To turn from these abstract considerations to the actual practical working of this fee question, there are a very large number of medical men, and those of the highest rank, who utterly decline to accept of such gratuitous service, and conversely there are a large number of dentists who, whilst themselves doing a large amount of gratuitous practice, nevertheless do not care to place themselves in a similar position, and invariably insist upon paying fees to their medical advisers, and if these be absolutely refused, make a present of equivalent value in the form perhaps of silver for which the recipient has no use. Within my own personal knowledge I could instance dentists who have done work in their career for their medical *confrères* which, had it been paid for, would have amounted to thousands of pounds, but who uniformly pay fees when they have occasion to seek medical advice; nay more, I could instance dentists who equally insist upon the payment of a fee when they consult another dentist. No hard and fast rule can be laid down upon such a subject, and it is very far from being my intention to advocate anything like an illiberal spirit in approaching the question, but I take it there will always in every practice be a certain number for whom we shall be really pleased to devote our time and energies quite irrespective of the fee, and to these and these alone should gratuitous service be given; it is mere hypocrisy to say that we are glad to give up time, to the exclusion of other patients, to every medical man, stranger or casual acquaintance

at the most ; it is not done in other professions, and so long as human nature is the same, as soon as the service becomes a heavy tax it will be evaded, not to the advantage of the recipient.

Yours faithfully, M.R.C.S., L.D.S.

[Our correspondent has misread us ; we wrote about accepting *full* fees.—ED.]

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—It has been a custom for members of the medical profession to accept no fees from one another, and dentists have fallen in with this habit to a large extent, receiving their *quid pro quo* in the form of gratitude. But something seems to have gone wrong with the supply of this latter commodity, for there has been no little talk lately of two instances in which the recipients of unpaid services have threatened actions for malpraxis upon grounds quite baseless and absurd. Unless my recollection be inaccurate, in the one instance the ungrateful patient was the daughter of a medical man who had received gratuitous service for many a long year, and was spiteful because, being married, she could no longer get it on the same easy terms ; while the other was a medical man himself, and the incident was the outcome of a single visit. To shew that this is no romance I enclose names as a guarantee of good faith, and am yours faithfully,

INDIGNANS.

The Best Method of Administering Nitrous Oxide Gas.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Will you kindly permit me to make a few remarks in explanation of the views which I expressed at the termination of Dr. Buxton's recent paper. The report in your Journal of last month might lead your readers to suppose that I advocate a method of gas-administration which is well-known to be productive of the most unsuccessful results. There is every difference between (1) breathing a limited volume of nitrous oxide over and over again from the commencement to the end of the administration—a method which I have never advocated—and (2) washing out the lungs with pure gas for the major part of the administration, and then allowing the patient a short period of to-and-fro inhalation. The latter is the method which I have ventured to employ in preference to others. It differs from that in which the ordinary "supplemental bag" is used, in that the bag which is employed is larger than Clover's "supplemental bag ;" so that, when towards the end of the administration, the "close" is substituted for the "open" form of inhalation, the amount of nitrous oxide which is placed at the disposal of the patient is greater than that which he breathes over and over again when the ordinary "supplemental bag" is employed. The effects of this difference I need not now pause to discuss. I have frequently demonstrated, at the Dental

Hospital and elsewhere, what very different results may be obtained by modifying the methods of gas administration. Many analogies exist between nitrous oxide and other general anæsthetics; and amongst these is the fact that, *cæteris paribus*, the greater the amount of the drug which can with safety be introduced into the blood, the longer will be the anæsthesia after the withdrawal of the anæsthetic. My contention, therefore, is that by administering nitrous oxide in such a manner that the patient is enabled to absorb the largest possible dose of the gas, the subsequent period of anæsthesia will be prolonged. When a limited volume of nitrous oxide is breathed over and over again throughout the administration, the resulting anæsthesia (unless the volume of gas at the command of the patient is a very large one, or the patient is particularly susceptible to the influence of the anæsthetic) is imperfect, because the tension of nitrous oxide in the blood never becomes sufficiently high. When, however, the "open" form of inhalation is employed till anæsthesia is nearly complete, *i.e.*, until the tension of nitrous oxide in the blood is nearly sufficient, and if at that moment the "close" form of inhalation be exchanged for the "open," the respiratory centres continue their functions for a longer period than under other conditions, and a more perfect form of anæsthesia results. I have tried every known method of administering nitrous oxide under ordinary pressures, including administrations of nitrous oxide and oxygen in varying proportions; and I must again emphasise the statement which I made at the Odontological Society, that the results which are to be obtained by the method above referred to will be found in practice to be superior to those of all other methods with which we are at present acquainted.

The objections which Dr. Buxton has expressed concerning the mode of administering nitrous oxide which I have previously described in these pages will, I think, be found to disappear when the details of the method are understood. To-and-fro breathing is not permitted except for a short time towards the close of the administration. Even were carbonic anhydride and other expiratory products (whose nature, so far as my knowledge goes, has not been determined with certainty) present in greater quantities than is actually the case, their dilution with the comparatively large volume of nitrous oxide would greatly minimise their influence. Any assumption that such products of expiration induce after-effects which are not met with in the ordinary method of gas administration is, in my opinion, the outcome of theory rather than practice. Clover's and Ormsby's ether inhalers depend for their action upon the re-breathing, with occasional intervals, of a limited volume of air and ether vapour; and in the administration of ether by these (the "close") methods, there must be a considerable accumulation of the bodies in question, from time to time, in the air passages. Yet the results of etherisation by Clover's admirable method are in no way more unpleasant, in fact are usually less unpleasant, than those which follow the admini-

stration of ether by the "open" method. I do not for one instant deny that the products of expiration are deleterious when inhaled for any length of time, or when present in considerable proportion to the air breathed. But when, in the case of nitrous oxide, the lungs have been thoroughly washed out by the anæsthetic gas, and when only a short period of inhalation into and out of a bag, containing a comparatively large volume of nitrous oxide, is permitted, they must surely be present in such infinitesimal quantities as to give us no concern whatever in the absence of evidence more tangible than that which has been already adduced.

With regard to economy in gas-administration, the smaller the volume of nitrous oxide, the more portable does the apparatus become. Further than this, in the event of the supply of gas falling short during the administration, it is of the greatest possible convenience to have command over the expiratory valve of the facepiece. By such a command it is possible to obviate the impending failure to induce perfect anæsthesia, and all will terminate favourably with a volume of gas which would otherwise have been inadequate. Messrs. Barth and Co. have lately introduced small steel gas-cylinders capable of holding 25 gallons each. With two of these, and with a face-piece arranged to administer nitrous oxide as above described, all cases may be successfully encountered. The advantages of requiring but a small volume of nitrous oxide as a preliminary to ether are even more marked in practice. By adapting a gas-bag to Clover's portable inhaler, and by using the face-piece with adjustable valves, I have never yet found it necessary to give more than two gallons of nitrous oxide (in the manner above described) before turning on ether and proceeding to full etherisation. The *gradual* admixture of ether vapour with nitrous oxide is a point also worthy of notice.

In conclusion I would apologise for occupying so much space upon what may be considered a trivial matter, but the practical nature of the question at stake must be my excuse for thus trespassing upon your kindness.

I am, Sir, your obedient Servant,

FREDERIC HEWITT.

10, George Street, Hanover Square,

April 6th, 1887.

Suction and Atmospheric Pressure.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—These terms, applied to the retention of artificial dentures made without clasps or springs, are, I think, at least unscientifically because inaccurately used.

The term "suction" certainly has its own significance, also the term "atmospheric pressure" has, undoubtedly, its significance. To use either alone would be scarcely correct. Many have abandoned the

term "suction" altogether, preferring the latter term to the entire exclusion of the former.

Now, let us enquire what factors are necessary to ensure that a plate is retained by what rightly or wrongly is generally termed "suction:" firstly, that we obtain a perfect impression of the palate; secondly, a plate adapted in every way to fit the plaster model; and thirdly, an even bearing upon the corresponding teeth of the opposing jaw—in other words, a perfect "bite."

First and foremost is the requirement (on the upper at least) that the plate and the model of the mouth (which it is presumed is perfect) correspond with great exactness.

Has it never struck others, as it has struck me, that in many cases where the plate holds up fairly well in the mouth, there is no such "suction" on the *model itself*? Take an edentulous upper for instance, with a flat palate, and very little alveolar ridge to rely on as an auxiliary to "suction." You may in a longer or a shorter time get the plate to hold up in the patient's mouth, and yet on the model, which surely ought to be more exactly a counterpart of a gold upper than the mouth itself, it will not hold up. If proof is wanted place it on the plaster model, and then reverse the model, and the result will be that it will fall. It has not even the ghost of an idea of holding on the plaster, although it is certainly to the plaster model that the mechanic works. Indeed I will go so far as to add that cases may be observed where poor impressions, which result in plates fitting the plaster model with the greatest exactness (*i.e.*, where a really skilled artificer has been employed in their construction), and which result also in plates which do not fit the palate well, may, after a time, be retained by "suction," and yet will not perhaps be retained on the plaster model when the latter is reversed for one moment. I of course except cases which have undercut edges on the buccal side of the alveolar ridge, and such plates will "hang" on a plaster model if they do not "suck up," as is the case in the mouth when a plate is successful. It therefore appears to me, that, if suction is a wrong term, atmospheric pressure is even more misleading, for why does the pressure of the atmosphere not retain a plate on a dry plaster model when reversed? I answer, that the retention of a plate is largely aided by moisture which forms a cushion, and expels the air, and I think it will be observed that a cushion of this sort is more readily formed where the secretion is viscid rather than where it is fluid, and I think this is the explanation why powdered gum tragacanth placed on the palatal portion of a "suction upper" (as was cleverly suggested by Mr. David Hepburn), aids the operator in his efforts to secure a suction plate of unusual difficulty, as it unquestionably does. The gum forms with the saliva a thick musilage, displacing the air very completely. Of course it is easy to see how necessary it is for the plate to fit the palate accurately, so that there be no great vacuum left at any part, as, otherwise, the retained air will unsettle the plate.

Given a plate which nearly fits the mouth, *capillary attraction* will soon introduce the moisture needful to expel all the retained air, and, *this done*, then, if you like, will the pressure of the atmosphere hold the plate in position firmly.

It would therefore appear, that after a perfectly fitting plate is adapted, three factors are wanted to ensure its holding up well : I. The absence of *air* between palate and plate. II. The presence of a layer of fluid to take its place, conveyed thither by capillary attraction. III. Atmospheric pressure.

I am not aware that these three factors have been generally recognised before—at least I myself have not seen them so classified previously.

E. M. TOD.

Lateral Movement in Articulators.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—With your kind indulgence I wish to ask those of your readers who are experienced in the use of the articulator for adjusting and regulating the bite, to kindly inform me what their experience and opinions are regarding lateral movement at the joint of the above. Do they regard it as an unnatural movement, and one likely to throw the true bite out of place, and thereby give unsatisfactory results?

I use "Graham and Wood's" articulator, and with much use it has got sufficiently easy at the joint to allow (very slightly) the above movement. I am therefore, anxious to satisfy myself regarding its correctness.

I am inclined to think that such a movement ought to exist to a limited extent; it seems to imitate more correctly the natural movement of the jaw. Trusting that some of those interested may see fit to give expression on the subject.

Your faithfully,

March 28th, 1887.

YOUNG PRACTITIONER, L.D.S.E.

Education.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Will you give the benefit of your advice and possibly attract the opinions of some of your readers upon the vexed question of the best education for a future dentist? Some weighty opinions seem to favour what is called a classical education; others more violently, if with less argument, denounce as useless all save mechanical instruction. This great difference of opinion appears to me to be of vast importance: it indicates a line which might be drawn dividing the dental world into two divisions, those who regard a dentist as a professional man, and those who regard him as a skilled mechanic; between these two divisions there can never be any understanding or agreement, the one side are as earnest in the desire for knowledge as the others are fierce in the defence of ignorance. The school—I should say the party, for school might be taken to imply the learning which is

their bugbear--the party who would bring up the dentist in such a manner that he should be only acquainted with the manipulative portion of his business seem to suspect that a child that has learnt Greek and Latin will never be able to adjust the rubber dam or to build up a tooth in gold ; whereas the advocates of education feel just as strongly that much of the malpraxis that abounds might have been avoided by a deeper, wider, and more liberal knowledge, and that societies might have been spared much pinchbeck science and bombastic twaddle if a little learning had been birched into their authors while they yet could learn. Learning at least brings modesty or diffidence and a sense of how little the stock of knowledge seems doomed to be, while ignorance adorns its possessor with self-sufficiency and often with brazen effrontery. He may be happier so, it is true ; in fact, to judge from the stormy self-glorification that occasionally wells from the lips of the pure mechanical party they are supremely happy : to show them what they really are would be one degree more painful than the undeception of Titania, one degree nearer home. I think this is a subject that would bear discussion, and therefore I venture to suggest it to you and your readers.

AN ADVOCATE OF CLASSICAL EDUCATION.

French Dental Hospitals.

TO THE EDITOR OF THE " JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—As I have recently returned from Paris, where I had an opportunity of visiting and carefully observing the arrangements of the two Dental Hospitals, I thought your readers might be interested by a brief account of what I saw there. The older of the two institutions, which is called *Ecole et Hopital Dentaires de Paris*, was established in 1880, at No. 23, rue Richen. When I visited it the building was literally crowded with people ; patients, students, and staff all seemed too many for the accommodation. I understood there were 120 students on the books, and that between seventy and eighty attended the hospital. The authorities are on the look out for new and more commodious premises, and as soon as these are obtained the work will be carried on in great perfection. The Directeur is M. Th. David, and the sous-Directeur, M. Ch. Godon. The course of instruction is spread over three years, the fee for the first being £12, and for the second and third £16 each. The student is during this period taken over the whole area of the theory and practice of his profession, beginning with the elementary facts of the scientific, surgical, and mechanical departments, and, as may be seen from the prospectus, omitting nothing that could possibly be of service to him in his practice.

The other and younger hospital is called the *Ecole et Cliniques Rutaires de France*, and is situate in the rue de l'Abbaye. The building is old, and was once, I believe, an abbey. The Directeur is M.

Brasseur, and the sous-Directeur, M. le Dr. Gaillard ; I saw from thirteen to fifteen chairs (one being in a small room by itself). The students are fewer in number, but this is rather an advantage, in so far as it allows of better accommodation. There is a very nice work-room, and I believe patients are supplied with artificial work. I cannot close my letter without a word of testimony to the thoroughness and care of the teaching staff at both Institutions ; there seemed to be many little hints to be gained from our neighbours, and I think it would be productive of good if the directors of the London and Paris schools were to interchange visits and experiences.

Yours, &c.,

AN OCCASIONAL CORRESPONDENT.

International Medical Congress.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—Will you allow me to request those of your readers who will assist in the Dental and Oral Section of the International Medical Congress, to furnish me with an abstract of their papers or the papers themselves at once?

These papers should be in the hands of the secretaries as soon as possible, in order that a definite programme may be arranged and a proper amount of time apportioned for each subject.

29, East Twentieth Street,

E. A. BOGUE, *Secretary*.

New York City.

March 7th, 1887.

Honorary Officers to the Dental Section of the International Medical Congress.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—As certain lists of Honorary Officers have already appeared in several Dental Journals, from which one would gather that no representatives for our own country have been appointed, may I be allowed to state that the lists already published, while probably correct enough as far as they go, are entirely unofficial, and that from reliable private information I know the due recognition of British representatives at the Congress is receiving the attention of the Officers and Council in America.—I am, &c.,

2, King's Parade, Cambridge,

GEO. CUNNINGHAM.

April 11th, 1887.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their Subscriptions for the current year were due on the 1st of January, and should be remitted to the Treasurer, at 40, Leicester Square.

According to the Bye-laws of the Association, Members who are one year in arrears are not entitled to receive the Journal.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. 5.

MAY 16, 1887.

VOL. VIII.

Special Hospitals.

THE multiplication of special hospitals has always been looked upon by the medical profession generally as a measure to be discouraged. The different departments of the large general hospitals, embracing, as they do, the whole scope of both medicine and surgery, are divided and classified and specialised for teaching purposes. They are thus made subservient, not only to the purposes of charity and benevolence, but to the welfare of the community at large, by providing for the medical student such detailed instruction in the minutiae of his profession as shall best enable him to serve the public in his future career as a physician and surgeon. Such institutions, combined with local dispensaries, are—apart from poor-law relief—generally considered sufficient to meet the wants of provincial

towns, and of the various districts into which large cities are divided. When separate hospitals for special diseases are started, they are too often pushed by a certain class of practitioners who are more anxious to push themselves than to promote either public charity or the dignity of the profession to which they belong.

They not unfrequently become the centre of a kind of practice which is far from what scientific medicine and surgery ought to be, and as the usual supervising body of governors is generally wanting, an opportunity is opened up for the promotion of personal objects, under the guise of charity. This, of course, places the promoters of such institutions in a very invidious position, from which no purity of motive can absolutely extricate them. Not only do such institutions divert subscriptions from the more fully organised and more useful establishments, but they diminish their efficiency as centres of instruction, by depriving them of many important cases which might have special interest and value for educational purposes.

Again, if these special hospitals grow to any size, their operation is still more objectionable, for besides continuing the evils of which we have spoken on a larger scale, they by their growth entail the employment of paid officials and an extended expenditure, which would be quite unnecessary in the special branch of a general hospital. The result is that in many cases, in order to draw upon the generosity of subscribers, by exhibiting a large number of applicants for relief, there is a kind of touting for patients, and "charity goes a-begging."

These remarks, if fairly considered, will apply with equal force to special Dental Hospitals, and we regret to notice that lately there has arisen a tendency to start separate establishments, in several instances where a dental department is already in existence, connected with the hospital

or infirmary of the town, and where they are not required for teaching purposes. The promoters of such institutions are generally young practitioners who are impatient of the ordinary slow methods of obtaining public notice, while keeping within the bounds of professional propriety. The arguments which they use in their justification, are frequently too true, and in a measure palliate the grave error perpetrated by their separated action.

1st. They say that the holders of dental appointments in town infirmaries and hospitals keep their positions too long, and so exclude younger members of the profession from their legitimate chance of advancement; and 2nd, that proper use is not made of the opportunities which are opened up by such appointments for serving the public.

Of course two such grievances may mean a great deal to those who complain. They see in an infirmary a fair field for the exercise of their profession in the more extended and conservative form under which it is their good fortune to have been educated. They think that if allowed to enter this field, they could maintain and extend the knowledge which they have acquired, and which is liable to stagnate, and even contract, while waiting for the slow advent of private practice. They see the dental duties of a large institution discharged by a short attendance once, or perhaps twice, a week by the dental surgeon, or perhaps by some dependent deputy who is either unwilling, or unable, or perhaps afraid to take any initiative in bringing about a change.


Perhaps the efforts of the discontented to introduce improvements may have been impatient or unwise or misdirected, but whatever may be the cause the result of separate institutions is to be deplored as tending to separate our profession from the great and powerful body of medical practitioners.

There are few towns in which the local infirmary might not be made more useful by the appointment of a staff of competent dental surgeons, one of whom could attend on each day in the week at such hours as might be arranged, and who could extend to the suffering poor those beneficent powers of our profession, which so far surpass the meagre and often questionable blessings of the forceps.

We would, therefore, respectfully urge upon those who hold hospital appointments in provincial towns, the importance of taking this matter into their serious consideration, before the evil which threatens us assumes uncontrollable dimensions.

The Association in Ireland.

AT the annual meeting of the Association last autumn, a hint was thrown out by our then Hon. Secretary (now treasurer) in an after dinner speech of the possibility, we might say the probability, of the speedy establishment of a branch of the Association at Dublin. The other day at Chester, Mr. Smith Turner, also in an after dinner speech, expressed a hope that a "feeler" from the "young octopus," as he playfully designated the Association, might soon make a grab at Ireland. We hope that the fulfilment of these predictions is not far off; we ought to have an Irish branch, and there seems to us no reason why the formation of such a branch should be delayed. Many members of our Association, some of whom are certainly not the least distinguished ornaments of our profession, hail from the sister isle, and it would be a great satisfaction to us to recommend to our readers to receive, the news of such an extension of the field of our labours. We ought to be represented in every corner of the United King-



dom, and there seems no very serious reasons why there should not exist some representative body fighting the same fight, and furthering similar ends in the colonies. We have not existed very long as a corporate body, but already our influence is being felt in every part of the Kingdom, already the public press take notice of our existence, already the irregularities of practice, which have always disgraced young professions, are losing ground in our speciality. Public opinion is slowly but surely rendering charlatanism and quackery more hazardous and less remunerative pursuits. A new generation of highly educated and upright practitioners is arising, and spreading its influence far and wide, and it is to our Branches that we must look for the furtherance and extension of the good work. Our Branches are becoming our sinews of war, and it is through their agency that we must, in the future, look to see most of the campaign carried on, and by their prosperity we may not unfairly gauge the prosperity of the Association as a whole. Under these circumstances, we feel that no time should be lost in creating a nucleus for our labours in Ireland. Scotland has already its Branches, and the good results of their work are already manifest; it is high time that Ireland followed suit. The increase in the number and efficiency of our Branches must bring with it a corresponding increase in our power and influence, and a spread of those great principles which we have combined to enforce and disseminate. Our existence as a corporate body is a testimony to the growing desire on the part of our profession to become a worthy part of the great parent medical profession; to preserve and cultivate its most elevated traditions; to render dentistry, in its highest sense of the word, a science, and to do our duty in the great business of relieving suffering humanity, with credit to ourselves, and with benefit to mankind. Believing,

as we do, in the importance of our mission, it is a matter of no small importance to see our flag planted in new districts, and new communities uniting together to help us in carrying out our ends and aims, and we trust another annual meeting will not be allowed to pass by without some definite information regarding a branch of the Association in Dublin.

ASSOCIATION INTELLIGENCE.

Central Counties Branch.

A MEETING of the Central Counties Branch was held at 71, Newhall Street, Birmingham, on Thursday, March 24th, present—The President, Mr. Breward Neale, and Messrs. Charles Sims, Charles Greene, W. Palethorpe, G. O. Richards, G. D. Orrock, C. D. Marson, J. S. Crapper, H. N. Grove, and J. Humphreys, hon. sec.

The minutes of the last meeting having been read and confirmed, the further discussion on Mr. W. R. Roberts' paper upon "Nitrous Oxide Gas," adjourned from the last meeting, was resumed.

Mr. ORROCK subsequently read a paper upon "The Preservation of Children's Teeth," which led to a lengthy discussion, in which Messrs. G. O. Richards, F. H. Goffe, J. S. Crapper, C. Sims, R. Owen, J. Humphreys, and the President took part.

Mr. HUMPHREYS exhibited a case of cleft palate in a calf five days old, the cleft extending from the intermaxillary bone backwards; the two halves of the lower jaw were separated, the tongue bifurcated, and an additional incisor tooth with no bony attachment, was present on the left half of the jaw. He also exhibited skulls of the guacho (showing outer pair of incisors and canines in upper jaw), porcupine, hydromys and porpoise, together with bodies of kangaroo rat, echidna and armadillo, and section of jaws of monitor lizard, showing successional teeth.

This terminates the series of ordinary meetings for the winter, which have been extremely well attended, many of the contributions being of especial interest.

At a Special Meeting of the Branch, held on April 22nd, it was decided to alter the date of the Annual Meeting, from the last week in October to the 22nd July.

The Annual Meeting will be held at Shrewsbury, Mr. W. E. Harding being the President elect.

A picture of Mr. Adams Parker, L.D.S. Eng., was exhibited at the Spring Exhibition of the Royal Society of Artists, Birmingham. Mr. Adams Parker was the founder of the Dental Hospital, Birmingham, and is now Consulting Dental Surgeon. The likeness is considered a very striking one.

Western Counties Branch.

A MEETING of the Council of the above Branch was held at the Plough Hotel, Cheltenham, on Saturday 16th April, the President, Mr. J. T. Browne-Mason of Exeter, in the chair. Mr. T. H. Gartrell, Chapel Street, Penzance, was elected a member of the Branch. Friday, July 29th, was fixed as the date of the annual meeting at Stroud, and it was decided to leave the general arrangements in the hands of the President elect (Mr. E. Apperly). The Hon. Sec. of the Branch will be glad to receive the names of gentlemen willing to read papers or give demonstrations at as early a date as possible.

Midland Counties Branch.

ANNUAL MEETING AT CHESTER.

ON Friday, April 29th, the annual meeting of the Midland Branch was held at Chester. The members of the Council first met in the Grosvenor Museum, and at the conclusion of their proceedings, the business meeting was held in the Lecture Theatre of the Museum. Mr. A. M. Matthews (Bradford), the retiring president, occupied the chair. Among those present were: Messrs. J. O'Duffy, (Dublin), A. Cocker (Halifax), F. Bullin, M. Johnson, G. Bonnallie, H. T. Millington, A. McDonald, F. Segar, W. J. Baker (Chester), E. H. Williams, W. Dykes, W. Kelly, G. G. Champion, W. Simms, W. Mackie (Manchester), W. H. Waite, W. Jewitt, W. Ladyman, T. Dilcock, R. M. Capon (Liverpool), J. S. Turner, L. Matheson, F. Canton, M. Smale (London), R. Rogers, P. Fernald (Cheltenham), A. M. Matthews, H. W. Sutcliffe, A. Howarth, E. J. Ladmore (Bradford), S. Wormald

(Stockport), T. E. King, W. Glaisby, G. H. Osborn (York), W. E. Harding, R. King (Shrewsbury), J. S. Crapper (Hanley), J. W. Senior, A. Glendinning (Huddersfield), T. Wormald (Oldham), D. A. Wormald (Bury), J. N. Manton (Wakefield), T. Murphy (Bolton), G. Brunton, J. H. Carter (Leeds), J. Taylor (Warrington), W. Lee (Northwich), W. Shillinglaw (Birkenhead), P. Ladmore (Blackburn), G. Holt (Bury), I. Renshaw (Rochdale), J. Pike (Sheffield), Jones (Sale), W. Taylor (Batley), F. Dale, W. Broughton, M. Ludbrook, F. J. Bonnalie, &c., &c., &c.

The HON. SECRETARY (Mr. W. H. Waite, Liverpool) read the annual report, as follows: "The record of the past year is darkened by the shadow of a double loss. Since we met at Bradford twelve months ago two of the earliest and most active supporters of the Branch have been removed by untimely death, namely, Major Stewart and Mr. T. Mahonie. Both those gentlemen took a very warm interest in the establishment of the Association, and they have left a gap which it will not be easy to fill. There have been two occasional meetings during the year, both held in Manchester, and both of a very interesting character, and very well attended. The Council have still to deplore the lack of interest shown by some of those whose personal assistance would be of immense value, but they are greatly encouraged to see so many of the younger practitioners coming forward to take their place in the ranks. There is scope for every variety of gift, and the highest honour to which a young practitioner can aspire is to do something to help forward the cause of professional advancement. The Council would remind the members that they are prepared to arrange for occasional meetings in any locality, if the desire is expressed. During the year a case of improper registration, in the Midland district, was laid before the Medical Council, and the name of the offender was at once removed from the Register. This case has yet to be dealt with further, but as the Association becomes known those who are infringing the "Dentists Act" are beginning to learn that it is wiser to retire from a false position than to attempt to defend it. There have been several instances in which timely remonstrance has had good effect, and it is evident that the influence of the Branch is steadily increasing, albeit there are still many evils to be corrected and many discouragements to be endured. The number of members and associates has increased during the year, although there have been two or three resignations in addition to the losses referred to

above. The Council nominate F. Bullin, Esq., J.P., as president for the ensuing year, and T. E. King, Esq., as president elect, and they recommend that the next annual meeting be held at York."

The TREASURER (Mr. S. Wormald, of Stockport), read his financial statement, showing, notwithstanding a donation of £10 10s. to the Benevolent Fund, a balance of £27 7s. 10d.

The reports having been adopted, Messrs. Waite and Wormald were unanimously re-elected secretary and treasurer respectively. Mr. WAITE expressed his indebtedness to Mr. Renshaw for his assistance in the secretarial duties. Messrs. Blandy (Nottingham), E. H. Williams (Manchester), W. H. Jewitt (Liverpool), and J. C. Storey (Hull), were elected to fill four vacancies on the Council, and Mr. Pike (Sheffield) was nominated on the Representative Board.

On the motion of Mr. MURPHY, of Bolton, seconded by Mr. ROFF KING, it was resolved that the retiring president should be a member of Council for the ensuing year.

The PRESIDENT said the time had now come round when he had to deliver up the seals of his office. He could say one thing certainly, that he had had a very pleasurable and happy year. He had encountered nothing which could make it otherwise. He had felt a wish that something might have occurred to make his year of office more prominent, but it was all the better for his successor who would thus see that there was nothing dreadful in the undertaking. He thought that whatever degree of success had marked his occupancy of the position was due almost entirely to the assistance which he had always received from the gentlemen around him. He thought he was striking the keynote of all their feelings, when he said he had unlimited confidence in his successor. He asked them to join him in wishing Mr. Bullin a happy and prosperous year of office.

Mr. F. Bullin (Chester), then took the chair amid cheers.

Mr. G. BRUNTON (Leeds), said they must not allow their late President to sit down so quietly without offering him their sincere thanks for the manner in which he had steered the Society during his year of office. For the building begun by Sir John Tomes and Mr. Smith Turner, at least a stone had been added by their kind friend the late President. He begged to move a hearty vote of thanks to Mr. Matthews for his services as President last year.

The SECRETARY, in seconding the resolution, paid a tribute to

the late President's worth, and the resolution having been unanimously adopted, Mr. Matthews briefly acknowledged it.

Mr. MURPHY (Bolton), observed that the statement made by the treasurer was a very healthy one. They had £27 in hand, and were not likely to require a very great deal to carry on the business of the Association. He begged to move for the second time that a donation of ten guineas be granted to the benevolent fund of the British Dental Association.

Mr. W. E. HARDING (Shrewsbury), seconded the resolution, which was supported by the President, and agreed to.

It was proposed by Mr. J. STOREY, seconded by Mr. T. E. KING, and carried, that the council should reconsider the date of the next annual meeting.

Mr. A. HOWARTH (Bradford), exhibited a new form of articulator which he had designed, and which attracted much interest.

Mr. GEORGE BRUNTON (Leeds), exhibited a few Arkansas points for polishing the margins of cavities before filling; also a needle drill for drilling out fissures, and a complete rubber dam.

Mr. H. BLANDY (Nottingham), exhibited some models of irregularities.

At this stage there was a short adjournment, after which the PRESIDENT (Mr. Bullin) then delivered his address, which we are unavoidably obliged to hold over.

After the Presidential address, the members then proceeded to the Grosvenor Hotel where, as guests of the President, they sat down to a splendid and admirably served luncheon. After the luncheon, the President's hospitality was acknowledged by a special vote, moved by Mr. James Smith Turner (London). In reply, the PRESIDENT said he was very proud of being the first man who had ever presided at a meeting of dentists in the city of Chester.

PRESENTATION TO THE HON. SECRETARY.

In the afternoon the members again assembled with their friends in the Lecture Theatre of the Grosvenor Museum, for the purpose of presenting to Mr. W. H. Waite, the popular Hon. Secretary, an illuminated address, and a purse of gold subscribed by friends in England and America.

The PRESIDENT expressed his pleasure at seeing such a large attendance of ladies and gentlemen on that interesting occasion, when they were about to make a presentation to their long-tryed

and indefatigable friend, Dr. Waite, than whom no one had been a greater friend of his brother practitioners for many years. It must give every one who had the interest of his profession at heart, in this country and on the other side of the Atlantic, unfeigned pleasure to know that they were sufficiently united as a profession to join in doing honour to whom honour was due.

Mr. I. RENSHAW (Rochdale), as secretary to the subscribers, intimated the receipt of letters of apology from Mr. H. Champion (Manchester), Mr. W. Bowman Macleod (Edinburgh), Dr. J. Walker (London), Mr. J. T. Browne Mason (Exeter), Mr. Geo. W. Cunningham (Cambridge), &c., and the following, which was well received by the meeting:—

37, CAVENDISH SQUARE, W.,

21st April, 1887.

DEAR SIR,—I am very sorry that I shall not be able to be at the meeting at Chester; but I am obliged to go elsewhere on that day, owing to an unfortunate combination of circumstances. Had I been able to attend the meeting, I should have esteemed it a great honour to take any active part in the presentation of the testimonial, for apart from gaining the personal liking of those with whom he has come in contact, he has done an immense amount of work in the promotion of our professional welfare. I am happy to say that my father is now well enough to be out of doors again, and is not far from having regained his usual standard of health.

I am, yours very truly,

CHARLES S. TOMES.

Mr. RENSHAW added that the amount subscribed to this testimonial by English friends was £300. He had just had a telegram from Mr. A. Underwood placed in his hands, relative to the action of Dr. Barrett, who had been co-operating with them on the other side of the Atlantic. The telegram ran as follows:—“Received £81 from Barrett, American subscriptions to Waite Fund. More is coming in. Congratulations.”

Mr. T. MURPHY (Bury), then handed to Mr. Smith Turner, for presentation, the purse and its contents, the purse being a piece of exquisite handiwork made by Mrs. S. Wormald.

Mr. SMITH TURNER (who was cheered on rising) said:—It rarely falls to the lot of one individual to possess pre-eminently both the power and the will to benefit his fellow-men. The ways and means by which men generally may be benefited and their condition in life ameliorated or improved, are as various as are the wants and necessities of suffering humanity, and these wants

are frequently diversified by circumstances which may be personal, or immediate, or remote. I think it is a mistake to suppose that misfortune and calamity are always the result of individual faults and failings. By the philanthropist different plans and methods and cross schemes have been devised wherewith to combat the ever present evils of our complicated social life, but all such plans, however slight or however extended and powerful, have to depend for their success upon a few individuals who at once combine both the power and the will to do the work. In vain may the big headed and big hearted millionaire bequeath his wealth to help his unfortunate brethren; in vain may the poor man subscribe his penny to help the still poorer, who has not the wherewithal to get a morsel of bread; in vain may our Dorcas sisters stitch and plan with ingenious frugality, to make one yard of stuff go as far as two; and in vain may the hard-working tradesman and professional man deplete his scanty savings to help the poor and needy, if the bold, eloquent, persuasive, prudent, kind-hearted, sharp-witted distributor, be not at hand to enforce the lessons which are taught alike by poverty and charity. Without him the evils which the charitable seek to mitigate are increased, and many a man, and woman and family are hopelessly pauperised, who might in a little sharper fight with adversity, have come out victorious, while the indolent and scheming pretender will divert the stream of charity from its legitimate course. Now, sir, possession means the power to give, and the act of giving indicates the will feebly expressed by the gift, and may be called the desire to do good; and this desire, thank God, is not uncommon amongst us as a people. But the power and the will which are so rarely in combination, are of a different character from such material possessions. They are those of eloquence, persuasion, prudence, and perseverance in the face of apparent failure before what seem overwhelming obstacles, and in the contemplation of the smallness of the means compared with the objects in view; courage to risk life and limb and health; courage to work against misrepresentation and ingratitude and every other difficulty; and the will, the strong unbending will which can place all the qualities I have enumerated at the disposal of that absorbing task. The unselfish will which can forego rest and leisure, and comfort and social enjoyment for the sake of suffering humanity, that is the power and that is the will which are so rare in their combination and in their manifestation. In a man

possessing such qualities religion ceases to be a creed and becomes a mighty soul-elevating, self-sacrificing influence. In such a man faith ceases to be a hazy reliance upon some future good arising out of present evil, and becomes an active unerring guide to duty, and an unfailing support under the most adverse circumstances. In a man actuated by such principles, there is no room for Phariseeism or cant. He looks not to the right hand or to the left, to gauge the social position of those with whom he works. Sufficient it is for him to know what the men are doing, and to know that his course and objects are the same, and that they are as honest and as single-minded as they ought to be. With such colleagues he will go on, and work, and work, and although he will not exact from them all the toil and self-sacrifice which he imposes upon himself, he will not plume himself upon his superior powers, or on the extent of his labours, but he will appreciate and value the help that is given by, and the counsel so often sought from, his less powerful and less active brethren. It is to such a man as I have endeavoured faintly to picture to your imagination that we have met to-day to do honour. That I have not exaggerated, all those who have known Mr. Waite will bear willing testimony. Those powers to which I have alluded and that strong self-abnegating will were all placed at the service of his profession in the hour of need, and to his honour be it spoken, without neglecting any of his previous engagements. But, gentlemen, I cannot help expressing to you the feeling which has so often possessed my own mind, that these extra efforts on our behalf, may have hastened the advent of that dark cloud, which has so early cut short his professional career.

Mr. RENSHAW then read the address, which was in the following terms :

British Dental Association.

TO W. H. WAITE, Esq., D.D.S., L.D.S., Oxford Street, Liverpool.

DEAR SIR,—We, the undersigned members of the Dental Profession, cannot but regard your retirement from the active pursuit of your professional duties as a fitting occasion on which to convey to you some expression of the high esteem in which you are held amongst us, both with regard to your personal character, and the honourable position you have obtained as a member of our profession, and of our appreciation of the value of the services you have rendered in promoting the cause of Dental Education and Organisation.

As one of the pioneers of Dental Reform, you contributed valuable

aid in securing the ultimate success of that most important movement which, culminating in the passing of the Dentists Act of 1878, secured to dentistry throughout the United Kingdom the status and privileges of a liberal profession.

As a member of the Representative Board of the British Dental Association, your clear and liberal views, your unflagging zeal, and your habitual self-sacrifice have gained the sincere admiration of your colleagues; and to your persistent advocacy and generous liberality, may, to a large extent, be attributed the existence of the Dental Benevolent Fund.

You will ever be remembered, especially in this district, as the Founder of the Midland Branch of the British Dental Association; and to your services as Honorary Secretary, continuously rendered from the first, the Association owes the success of what has been aptly termed its model Branch.

By the Dental Profession, at home and abroad, you are widely respected for your kindness of heart, your sterling integrity, and your able and consistent advocacy of all that is just, liberal and enlightened; and you now carry with you the deep and affectionate sympathy of both British and American friends, the latter of whom participate in this expression of our regard.

We beg of you to accept this Address, the Book of Signatures and Letters, and the accompanying Purse of 382 sovereigns, (£81 17s. 6d. being contributed by your American friends), with our united and earnest hope that you may long be spared to promote, by your counsel and influence, the welfare and interests of the Dental Profession.

Presented on behalf of the Subscribers, by JAMES SMITH TURNER, Esq., M.R.C.S., L.D.S., Vice-President of the British Dental Association, at the Annual Meeting of the Midland Branch, held at CHESTER, April 29th, 1887. Signed, on behalf of the Subscribers,

S. WORMALD, Stockport (Chairman).

I. RENSCHAW, Rochdale (Secretary).

T. MURPHY, Bury (Treasurer).

H. CAMPION, Manchester, First President of the Midland Branch.

A. M. MATTHEWS, Bradford, Ex-President of the Midland Branch.

F. BULLIN, Chester, President of the Midland Branch.

EDWIN SAUNDERS, Knight, London, President British Dental Association.

JOHN TOMES, Knight, London, President Representative Board of British Dental Association.

JAMES SMITH TURNER, London, Vice-President Representative Board of British Dental Association.

FREDERICK CANTON, London, Treasurer British Dental Association.

MORTON SMALE, London, Secretary British Dental Association.

W. C. BARRETT, Buffalo, N.Y., for American Friends.

Mr. SMITH TURNER (addressing Mr. Waite) proceeded : In the name of the leading members of the dental profession in Great Britain and Ireland, and many of our friends in America, I have the honour to present to you this token of their esteem, and, for those who have the pleasure of your more intimate acquaintance, I may say affection. I shall not presume to enlarge upon the contents of this address, but there are two things I should like to name. The first is that the most remarkable feature about this testimonial has been its spontaneity. There has been no dragging out of the time, no shouting of the last opportunity. The time from its inception up till now has but barely sufficed for the ordinary work which is generally associated with such matters.

We are all delighted though not surprised by the alacrity of the response made by the profession when the scheme was published, and it was only the desire of the committee to keep faith with the subscribers which prevented an American contingent from appearing to-day on the list of names in your album. The second matter I would venture to mention is that your enforced withdrawal from practice has only hastened the inevitable, for in due course of time such work as yours could not but have met with merited recognition from a grateful profession. I hope this will long be preserved by your descendants to keep green the memory of a good man.

Mr. S. WORMALD then in a suitable speech presented Mr. Waite with an album, containing a copy of the Address, a list of the subscribers, and a number of letters which the Secretary had received. He hoped this presentation would prove not only a source of pleasure to Mr. and Mrs. Waite, but also in after years an incentive to their dear boy.

Mr. WAITE, in returning thanks, said : Mr. President, Mr. Turner and dear Friends, there are two misfortunes to which men are exposed in passing through this world, viz., to be estimated below their true worth and to be estimated above their true worth. This munificent gift and the abundant testimony of appreciation by which it is accompanied, show that the latter has befallen me. No words can adequately convey the mingled thoughts and feelings evoked by your kindness ; indeed, I hardly know which thought is uppermost, your goodness or my unworthiness. The address refers to attempts made in behalf of our profession ; well, if I have been able to render any little service in that way I can only say the reward has been in the work. The man who takes no interest, who puts forth no effort for the general good, is, to my mind, a

phenomenon ; I cannot understand him. To do a little now and then, as it might be given one to do, in connection with the British Dental Association or the Midland Branch, has been perfectly natural, a matter of course—even more, a delight. It seems quite remarkable that so much notice should be taken of it ; the goodness of my friends has led them to an exalted estimate. But leaving the personal aside for a moment, let me say we have great reason to rejoice in the constitution of our Association, in that it affords scope for the development of high moral attributes within the range of its somewhat limited area of operations. Had the British Dental Association been simply a political organisation it would certainly never have fired any zeal in my nature ; although just now and for a while to come we must have, and are bound to exercise, political functions. Since, however, it is impossible to purify or ennoble men by legal enactments, I hope we shall have as little recourse as may be to the processes of law, and rely on moral suasion, the force of example, with the exhibition of a conciliatory spirit, as the most effective means of advancing our cause. Again, a merely scientific aim would, I think, have been little less than a mockery of present dental requirements ; we have scientific societies, all honour to them and to those who labour in them ! I give place to no man in my admiration for the genius of patient study and search after truth, especially when this is allied with the lower gift of wise administrative ability, as we see both conjoined in the person of our veteran leader, Sir John Tomes. Mutual improvement is in itself a worthy aim, but when unchastened by any purer aspiration it has been known to degenerate into mutual admiration. The charm of the British Dental Association, to my thinking, is that it has for its main object the renovation of all, outside as well as inside, and especially of those who are not even conscious of their need. This element, when rightly understood, redeems all our effort from that which is selfish and unworthy, and infuses into every detail the spirit of a generous philanthropy ; and that philanthropy has already found expression to a noteworthy extent in the establishment and distribution of the Benevolent Fund.

I am proud of the British Dental Association, of its objects and operations. I am proud of the honour of having been able to lend a hand in its establishment ; and I hope to be able even yet to do a little in its behalf. I will say yet more : I hope to see the day when the entire management of affairs connected with

the Dental profession, will be vested in, and under the control of the British Dental Association. I am proud also of belonging to the Midland Branch; there is no district in the country where it is more necessary, or more difficult, to maintain the purity and integrity of professional character. The peculiar exigencies of life in these manufacturing towns afford opportunities of competition and unprofessional methods such as are unknown in other localities. I am within the limits of actual personal knowledge when I say, that the honour of our Association is nowhere upheld more bravely, nor at greater cost of self-renunciation, than among the Members of the Midland Branch.

And now, dear friends, with reference to this splendid Testimonial. It does not surprise me at all to find my trusty comrade, Sidney Wormald, at the front of anything of this kind; we have marched side by side, for a dozen years at least; I know the goodness of his heart, and the solid integrity of his nature. I thank you, my faithful friend, for this book of letters. Whoever first conceived the idea of preserving them in this shape, performed an act of the most delicate consideration. I shall treasure it as long as I live, in memory of this day. Not less shall I value this beautiful purse, the donor of which (Mrs. Wormald) is a friend from whom I have already received many acts of real kindness. When I think of all the trouble, the patience, and the perseverance, displayed by my good friend Renshaw, I am reminded of that phrase, "a brother born for adversity." His kindness in this and many other matters has ever abounded towards me. He has inherited a disposition of genuine benevolence, and while devoting himself unsparingly to deeds of kindness, he is at the same time a consistent and ardent supporter of every movement that conduces to the advancement of our profession. The names of Messrs. Murphy, H. Champion, G. Brunton, D. Wormald, H. Blandy, W. Harding, J. L. Pike, E. Williams, A. M. Matthews, and others belonging to the Midland Council, are always suggestive to me of much faithful support and constant encouragement. From the very beginning I am indebted to them for the success of our Branch, and for example and inspiration in all our work. Friends of the Midland Branch, I cannot possibly thank you as you deserve; your kindness to me to-day demands a more eloquent tongue than mine. I wish I could express the extent of my feelings towards you all; your goodness to me is personal; it touches my heart. As long as I am able, I will try to prove my

appreciation by new efforts in your service. Nothing could have been more gratifying than to receive this handsome gift, from those with whom I have been so intimately associated. That the movement should have spread to other parts of the country, and included so many of the leading brethren, in London and elsewhere, imposes upon me a debt of gratitude and obligation, the full measure of which it is difficult to realise. To all those gentlemen, officers of other branches, &c., who have so generously helped this matter forward, I desire to tender my sincere acknowledgments, and I feel particularly honoured by the presence here to-day of the officers of the British Dental Association and other friends from a distance.

I am indebted to you, friend Turner, not only for the trouble you have taken in coming here to-day, and for all the kind words you have spoken in making the presentation, but also for much valuable counsel and help, when they were specially needed. It was you and your good wife who took care of me in London when I was stunned by the blow which fell upon me; and my wife and self will never forget the kindness and sympathy you shewed then, and ever since. "A friend in need is a friend indeed." Our esteemed president, Mr. Bullin, has contributed immensely to the success of this presentation, by the princely generosity with which he has enabled us to offer such an attractive programme at this anniversary. His acknowledged position in this district is a testimony to his energy and professional ability, which we all admire and rejoice in.

But, friends, your manifestation of sympathy has aroused an echo across the sea. In view of the spontaneous and generous action of American brethren, I am speechless! It is utterly unmerited on my part! It can only be construed as a graceful testimony of fraternal goodwill towards the whole profession, on this side the water. As such I accept it; I could even rejoice in my affliction, if it should be the means of strengthening in any degree the bonds of mutual esteem and good understanding, between English and American dentists.

When I was definitely told, some months ago, the serious and hopeless character of the trouble (dread of which has shadowed my whole life), it seemed as if the knell of all outward activity had rung. I began to say to myself, "Well sir, what does your life amount to? What have you done in the world all these years?" for when the curtain begins to fall, these questions assert them-

selves with irresistible emphasis. The retrospect was not satisfying; and the thought of lost opportunities produced feelings akin to despair. Most thankfully do I acknowledge the practical sympathy and overwhelming kindness of private and professional friends at home and abroad, at this crisis. By these, I was made to feel that there were possibilities still left; though some avenues were closed, others still remain open. These tokens of goodwill from my brethren will cheer and encourage and comfort more than anyone can imagine who has not passed through a similar trial.

And now in conclusion, on behalf of my dear wife and son, as well as for myself, let me say, we gratefully appreciate the intrinsic value of this testimonial, and not less these more permanent gifts, designed by your kind thought. Whatever the future may bring, it can never efface the remembrance of this day; but most of all, we thank God who has put it into your hearts to afford us this encouragement, and thus to throw a broad beam of light across the darkest hour of our experience.

On the motion of the EX-PRESIDENT, seconded by Mr. MORTON SMALE, a hearty vote of thanks was accorded to Mr. Smith Turner for the part he had taken in the proceedings. Mr. CANTON (London) proposed, Mr. DAVID WORMALD (Bury) seconded, and it was unanimously resolved "That this meeting hereby records its hearty appreciation of the fraternal sympathy manifested by American brethren towards our Hon. Secretary, W. H. Waite, as evinced by their prompt and generous participation in the testimonial presented to him this day, and desires to convey grateful acknowledgments to Dr. W. C. Barrett, through whose kind thoughtfulness and energy the co-operation of American friends has been secured; also resolved, that a copy of the above be sent to Dr. Barrett."

A vote of thanks to Mr. Renshaw for his services as secretary, moved by Major ROGERS (Cheltenham), and seconded by the EX-PRESIDENT, and a similar compliment to the President for having taken the chair, brought the afternoon meeting to a close, two papers—one by Mr. M. Johnson, L.D.S. (Fellow of the Royal Microscopical Society), on "A Practical Demonstration on Cutting and Mounting Sections of Teeth for Microscopical Examination," and the other by Mr. R. Edwards, L.D.S., M.R.C.S., on "Amalgam Alloys"—being taken as read, owing to the lateness of the hour.

On the day of the presentation to Dr. Waite in Chester we received in London a letter from Dr. Barrett, of the *Independent Practitioner*. It enclosed the sum of £81 17s. 6d., which had been contributed in an almost incredibly short space of time by Dr. Waite's American friends and sympathisers. The letter itself expresses so gracefully the genuine readiness to join in a good work on the part of the writer and his countrymen, that we cannot refrain from giving it to our readers *in extenso*, the more so because it unfortunately reached us just too late to be read at the meeting.

THE INDEPENDENT PRACTITIONER, EDITORIAL OFFICE.

208, Franklin Street, Buffalo, N.Y.,

April, 16, 1887.

T. MURPHY, Esq., Hon. Treasurer Waite Testimonial Fund.

MY DEAR SIR,—I hereby transmit to you the sum of 400,00 dols. as the contribution of a few American dentists to the fund of which you are custodian. Science knows no boundary lines, no bourne of country. Professional sympathy and kindness in America are not contained within State limits, but extend wherever a professional spirit exists. Especially toward the dentists of England, who speaking the same language, of the same lineage and traditions, are engaged in the same common cause, do the hearts of American dentists go out, and no sooner do they learn that their English brothers are engaged in a good work, than a longing possesses them to have some share in it.

It is this fraternal spirit which has prompted a few American dentists to ask a part in the satisfaction, which will be felt on the accomplishment of the object which has prompted the formation of the Waite Testimonial Fund. Many of us too, are acquainted with Dr. Waite, and the respect and esteem which is felt for him in England finds an echo in many an American heart. Nor should this feeling be gauged by the amount of the offering. It should be known that but ten days were allowed from the time of the first authorization to act by the English Committee, until the fund must be closed, that it might arrive in time for the presentation. This precluded all consultation or combined action. The only thing possible to be done was for me to assume the responsibility of acting for my brethren here, and to immediately send out a circular stating what was desired. This was addressed to but a few of the prominent dentists, but the response was immediate and enthusiastic. There is little doubt that had time been ours for a general appeal, a large sum could easily have been raised. As a type of the alacrity and cheerfulness with which the contributions were made, you will allow me to quote a few words from the responsive letter of Professor Taft, of Cincinnati, Ohio.

"I doubt not that every one who has the opportunity to share in this matter, feels in common with myself, that it is a delightful privilege to be able, though in this hurried manner, to give expression of the very high regard and esteem entertained for Dr. Waite, on this side of the water. And not only this, but he may be assured of the warmest sympathy and, an earnest desire that now and in the days to come, a large measure of life's comforts and happiness may be enjoyed by him. Dr. Waite's name is familiar in the dental profession throughout the world, and a sense of sadness and regret will everywhere be felt for the shadow that has fallen across his life's path. I trust that all may realize fully that the Atlantic is no barrier to the bounds of professional brotherhood, fellowship and sympathy, and that in the future, as much or more than in the past, it is our hope that the dentists of England and America may be drawn into yet closer relationship."

And now Sir, let me again say that we desire that this contribution to the English fund may be accepted as an earnest of the goodwill and esteem in which American dentists hold their English brethren, and especially the beneficiary of it.

I transmit herewith a list of the American subscribers in the order in which their contributions were received,

And am Sir, most truly yours,

W. C. BARRETT.

List of American subscribers to the Waite Testimonial Fund.

J. N. Farrar, New York City	\$25,00
W. F. Litch, Philadelphia	5,00
Frank Abbott, New York City	10,00
C. N. Pierce, Philadelphia	5,00
William Jarvie, Brooklyn, N.Y.	5,00
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T. T. Moore, Columbia, S.C.	5,00
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S. B. Palmer, Syracuse, N.Y.	5,00
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A. M. Dudley, Salem, Mass.	5,00
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W. H. Dorrance, Ann Arbor, Mich.	2,00
J. Morgan Howe, New York City	10,00
J. Bond Littig, New York City	10,00
W. C. Barrett, Buffalo, N.Y.	8,00
<i>The Independent Practitioner.</i> Account of Printing, Postage, Collections, Stationary, Telegraphing, &c.			\$00,00

\$400,00

THE DINNER.

In the evening the annual dinner was held in the Grosvenor Hotel, the President in the chair. There was a large company, including, in addition to those who were present at the afternoon and morning meetings, Dr. Eyton-Jones, chairman of the North Wales Branch of the British Medical Association, Dr. Dobie, Dr. Stolterforh, Dr. Taylor, Dr. Grainger, Dr. Lees, General Ingall, Mr. G. A. Dickson (ex-mayor), Mr. J. E. Edwards, J.P., Mr. J. Dobbs, and others.

The PRESIDENT gave the toast of "Her Majesty the Queen," which was honoured in the usual loyal fashion, as was that of "the Earl and Countess of Chester (Prince and Princess of Wales), and the other members of the Royal Family," also proposed from the chair.

Dr. EYTON-JONES next submitted the toast of "The British Dental Association," and in doing so, after a few preliminary observations and a reference to a journey up the Nile, said: Up the Nile, I found a condition of things which strongly reminded me of the history of surgical science two hundred years ago, for there I found that the local surgeons were in the habit of performing phlebotomy, the extracting of teeth, and the shaving of heads. But whilst the barber surgeon remains in Egypt, I am glad to think that here in enlightened Europe he has disappeared. Still, even for Egypt there is a grand future. There are nearly 400 students in the Medical School, where anatomy, physiology, chemistry, and the sciences are taught, and now for the first time they have started a class for microscopic education. Forty years have elapsed since I entered the medical profession, and when I entered that profession I was taught that I was expected to treat every disease that tended to the failure or degeneration of the human system. When I look around me now and find that every organ of the human system has been relegated to a specialism, I feel that the principle of medical and surgical science has grown with such enormous and rapid strides that, to use a remark of Sir James Paget made to myself recently in London, "I feel that medical science is progressing like a rapid river, and that I cannot possibly keep up with it." The growth of intelligence, the progress of science is such, that no human individual can grasp the whole of the quantities that we have to deal with, but to make it subservient to the interests of human nature, to the relief of human suffering and to the promotion of medical science, it must be divided amongst a large number of people. As I know that we have few here who are not professional men, I will venture to make a few professional remarks upon the present condition of things. The speaker here proceeded to refer in detail to the numerous specialities that had arisen and the successes achieved by their representatives. After making some complimentary allusion to the skill and eminence of the chairman as a specialist, he went on to say that dental surgeons should stand upon an eminence equal to the physicians and the

surgeons of the country. They have to undergo a curriculum of four or five years' study. They have to learn anatomy, and dissect; they have to learn physiology, they have to be versed in chemistry, practical and theoretical, and in surgery and medicine; they have to know all the ailments of the body which can be reflected directly or indirectly upon the specialism to which they are devoted. If that is the case, I say they are bound in the future to be a highly intelligent, thoroughly competent, well educated body of men. I say, long may the profession of dental surgery flourish, as one of the many specialisms relating to the treatment and care of the human system, giving us what I call the first stage in that eminence of life, which is dependent upon our having a good grinding organ. I trust that as a society you will uphold and maintain what you have got in your rules, that you will join us of the medical profession and say that it is derogatory to advertise, that it is derogatory to expose those special manipulations which are the common property of all; that in raising the status of the profession to which you belong, you will combine in one effort to make it worthy of the society to which you are attached, and that you will join with ourselves in making the human body as far as you can, one capable of resisting the ravages of nature, and making it fit to withstand the terrible trials of our acclimatization.

Mr. J. SMITH TURNER (of London), on rising to respond, was cordially received. He said: I shall not detain you long in responding for the young octopus, the British Dental Association. I cannot help indulging in a chuckle to myself when I see it stretching out its feelers and grasping one town after another throughout the length and breadth of England and Scotland. I hope it will be soon able to make a grab at Ireland also. The position of the dental profession has occupied the attention not only of dentists but also of medical men, particularly their representatives on the Medical Council for some time back. The gentleman who proposed the toast to you alluded to the position of the dental profession. Now it seems to me that the dental profession is in a condition to make its own position. Every medical man before he commences the study of his profession, and rightly too, has to pass an examination in arts. He has to show that he possesses a general education which will enable him to appreciate the higher scientific training which his future profession will demand of him. Now when he starts from that point he follows

his studies as a student and obtains his diplomas, and it rests with himself how far he may afterwards distinguish himself in the professional world. The profession is gauged by the standard of the education of its members generally ; and if we take that standard for the medical profession I think we are entitled also to take that standard for the dental profession. As we know, every dental student who now presents himself as a candidate for a dental diploma has, before he commences his studies to pass precisely the same examination as that which is passed by the medical man. The future of the dental student and the dentist is that of the medical man. He starts from the same level of education. It therefore rests with the dentist how far he puts himself on a par with the medical man, because in all the requirements of education he is his equal, the only difference is in the after-training which the dentist has to pass through. He diverts from the strict line of ordinary surgery, and pursues a more limited or rather a more special course in the study of dental surgery. In doing so he may ultimately be able to distinguish himself and assume a high footing in his profession. The medical man can do no more. So that, speaking with all due modesty, I think the time is coming when we may fairly consider that we are paying toll to society, as strictly and as generously as any other profession under the sun. We have all to bring something to society. Some people bring talent, some bring genius ; the professional man brings culture. The dentist, according to the standard of medical education, also brings culture. He brings time spent in training for his profession—time exactly the same as that which the medical man brings from the study of his profession. I hope when I take this position the medical gentlemen present and the public will not think I am taking too high a position ; for rest assured, the better the dental profession is educated and the more thoroughly the members of that profession become professional men, the better will the public be served and the more confidence will they have in their dental advisers. With reference to this question of specialities so largely entered upon by the gentleman who proposed the toast, I can only say it is a question which admits of very different views according to the way in which you look at it, and that the medical profession is very much divided on the question of specialists. For my own part I think it is necessary, according to the advanced state of science, that those who would acquire or who would aspire to a high position in any branch of surgery or medicine, should

give up their time entirely to it when that is possible. With the general practitioner I don't think anyone can expect that for a moment—and it is the general practitioner who has to do the bulk of the work in the country—and therefore the specialist must be considered as the consultant in a general way in that special branch which he may take up. But there is this peculiarity which I would call your attention to with reference to all specialists and all the special branches which were named by Dr. Eyton Jones, and that is that the medical man in passing through his curriculum is trained in it to every one of them. He is trained in ophthalmic surgery, in obstetrics, and all those particular branches in which afterwards he may wish to excel. But I defy any medical man to say he finds in his curriculum the training which makes him a dentist. Dentistry is of necessity a speciality, and it will ever remain so. This training of a dentist is manifold. Not only should he have a knowledge of physiology and anatomy, a knowledge of medicine and surgery, but he must have a manipulative power which is only to be acquired at an early period of his life and by continuous application, and this training is not provided for in the medical curriculum in any way whatever. Neither is it provided for in any medical school in the country ; it is provided for fully and entirely only at dental hospitals. Hence I say that dentistry indisputably stands by itself as a speciality. If we wish to continue it so we must support those who have been working for it to bring it up to its present standard, and the object of the British Dental Association is to help those who wish to raise dentistry to its proper position as a liberal and educated profession. But as a speciality it will not be divorced from medical surgery and from the liberal profession which goes right and left to alleviate pain and suffering, but attached to it as a distinctive and honourable branch. The Association was called into existence by the passing of the Dentists Act. It was that Act which marked out dentistry as a profession, and the Association has supported it not only as a profession but as a speciality which has particular work to do. We have no idea of trenching on the ground of medicine and surgery. We have enough to do to master the difficulties and peculiarities of our own profession. I will not enter into the political aspect of the British Dental Association. You have monthly the Journal of the Association, which tells you as plainly as literature can tell you all that is being done for the welfare of the profession. I thank you, gentlemen, for assembling

here in such numbers to support the Midland Branch of the Association, which well represents it in every degree and quality, and hope that when you have a meeting next year it will be equally successful and equally enjoyable. In the name of the Association, in the name of those who are present and those who are absent, in the name of our esteemed President, Sir Edwin Saunders, and the esteemed President of the Representative Board, Sir John Tomes, I beg to thank you all.

Mr. W. H. WAITE proposed the toast of "The Army, Navy, and Reserve Forces," in an appropriate speech, and General Ingall, C.B. (Chester), responded, for the Army, and Major Rogers (Cheltenham) for the Reserve Forces.

Mr. Fredk. CANTON (London), submitted the toast of "The Chester General Infirmary," observing that for the last forty years, that institution had had a dental department connected with it.

Dr. STOLTERFOTH and Dr. TAYLOR responded.

Major ROGERS gave the toast of "The Town and Trade of Chester," which was acknowledged by the ex-Mayor of the city (Mr. Geo. A. DICKENS, J.P.).

Mr. W. E. HARDING (Shrewsbury), in a eulogistic speech proposed the health of "The President of the Branch," dwelling amid cheers on Mr. Bullin's hospitality, and the splendid reception he had arranged for the members.

The PRESIDENT, responded in suitable terms.

During the evening some charming vocal music by Mr. Webster Williams added considerably to the general enjoyment.

THE EXCURSION.

On Saturday morning the members, sixty in number, accepted the generous invitation of the President to visit Hawarden Castle and Eaton Hall. Waggonettes and char-a-bancs were provided, and the party left Chester at ten o'clock for the village of Hawarden, some eight miles distant; arrived there, the church was first inspected, and then the whole company proceeded to the ruins of Old Hawarden Castle, where they were received by the gardener and conducted over several parts of the remains of what was once a great stronghold. The guide gave many interesting historical and other details connected with the place, and greatly amused his audience by his genuine admiration for the family in whose service he had spent the greater part of his life. Having passed

through the grounds surrounding the residence of the Right Hon. W. E. Gladstone, they were next driven across to Eaton Hall, the magnificent and delightful residence of the Duke of Westminster. Here they were conducted all through the conservatories, greenhouses and gardens by the President, who appeared to be quite at home in the domain of his noble patron. After this the whole party were admitted to view the handsome and richly decorated state apartments ; while thus engaged the noble Duke appeared in the midst of the group, and himself conducted them to some of the finest of the many costly treasures of sculpture and art with which the ducal mansion is profusely embellished. The President and Secretary thanked his Grace for the privilege enjoyed, and the company withdrew to a cottage on the banks of the Dee, where a welcome lunch had been provided. The good things being disposed of and the guests feeling in good humour for acknowledging their large indebtedness and true appreciation, the EX-PRESIDENT and the HON. SECRETARY gave utterance to the unanimous sentiment of those present, and several ringing rounds of hearty cheers resounded through the air. A very sincere expression of admiration for the efficient and satisfactory organisation of the Chester meeting was made in the form of a most enthusiastic vote of thanks to M. Johnson, Esq. (Mr. Bullin's partner), and then boats having been secured the whole company embarked, and had a most delightful sail down the river to Chester.

Thus terminated the seventh anniversary of the Midland Branch, the pleasure and success of which is chiefly due to the professional spirit displayed by one of the most successful of our provincial practitioners.

Eastern Counties Branch.

THE Annual General Meeting will be held at Bury St. Edmunds, on Tuesday, July 5th.

Gentlemen willing to contribute papers, or bring forward any casual communications, will oblige by giving notice of their intention to the hon. sec., W. A. Rhodes, 53, Trumpington Street, Cambridge.

Langmore Defence Fund.

We extract the following from our contemporary, the "BRITISH MEDICAL JOURNAL," believing it will be of interest to our readers:—

ON August 20th, 1884, Dr. J. Wreford Langmore, of Oxford Terrace, Hyde Park, London, was served with a magistrate's order, directing him to visit and report on the mental condition of an alleged lunatic. He obeyed the order, found on examination that the patient was undoubtedly insane, and certified to the fact. The patient was in due course brought before the late Mr. Flowers, one of the magistrates at the Marylebone Police Court, who, after a further personal examination, signed an order for her removal to the public asylum at Banstead, where she was detained until October 17th, 1884.

In September of the following year the plaintiff commenced an action against Dr. Langmore and Mr. R. S. Armstrong, of St. Peter's Park, who had previously given information of the case to the relieving officer, charging them with having maliciously conspired together to have her confined in an asylum. This action was tried before Mr. Justice Manisty and a special jury, in November, 1886, and resulted, after four day's trial, in a verdict for the defendants, with costs. The amount of the costs was considerably increased by the fact that, on the plaintiff's petition, one of her witnesses (the medical man who was actually attending her at the time of Dr. Langmore's visit) was examined by special commission; but at the trial the plaintiff refused to put in the evidence thus taken, or to place the witness himself in the box, though it was elicited that he had been quite recently, and it was inferred that he was then, resident in England.

The plaintiff being a person of small means, Dr. Langmore has not been able to obtain payment from her of any of the costs awarded him, and has been called upon to pay legal expenses amounting to £240 8s. 1d., irrespective of personal expenses connected with the action, and the inevitable loss of time and practice.

As stated in the Journal, the Council of the Metropolitan Counties Branch of the British Medical Association has resolved to open a subscription to defray Dr. J. W. Langmore's expenses. Gentlemen desirous of assisting the fund are requested to send their donations to Mr. George Eastes, M.B., 69, Connaught

Street, Hyde Park Square, London, W., one of the Honorary Secretaries of the Branch.

List of Subscribers.

Mr. W. Adams	£3	3	0
Mr. C. A. Aikin	2	2	0
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Mr. M. J. Verdon	1	1	0
Dr. E. H. Vinen	1	1	0
"W. D."...	0	10	6
Dr. H. W. Webster	0	10	6
Dr. Julian Willis	1	1	0
Mr. R. H. Woodhouse	1	1	0

REVIEWS AND NOTICES OF BOOKS.

A SYSTEM OF DENTAL SURGERY, by Sir JOHN TOMES, F.R.S., &c. Third Edition, Revised and Enlarged by CHARLES S. TOMES, M.A., F.R.S. J. & A. Churchill, London. Pp. 772.

WE do not think there is any literary event that is regarded with more interest by the dental fraternity in this country than the re-appearance of "Tomes' Dental Surgery." Twenty-eight years ago the first edition of the work was completed by Mr. John Tomes (as he was then), and at once became what it still remains, and will probably always continue to be, the standard English Classic of Dental Surgery. It will probably be re-edited again and again, and most likely will share the fate common to standard works, of losing much of its original character under the hands of succeeding editors; but one characteristic we trust it will always retain, a characteristic that constitutes one of its chief claims to its present position, namely, that of being an impartial record of the most generally accepted views of the day, and not lending itself to the furtherance of pet theories and hobbies, but fairly representing all respectable opinions.

The editor has, we are very glad to see, made a great point of preserving the original character of his father's book, and this he has succeeded in doing, notwithstanding the great changes in dental science and art that have occurred during the fourteen years that have elapsed since the second edition was produced in 1873. This success may be traced to two causes; first, that the original work came from the pen of a man who never in his life said anything or wrote anything in a hurry, and therefore there is little in his writings that he finds it necessary to repent at leisure. He never rushed to conclusions from a few facts, and had to rush back again when a few more facts came to light. His method of research may seem very slow to some of our impatient contemporary investigators; incredulity and scepticism may appear to have been pushed too far when years of laborious repetition of experiments and testing of results, were thought necessary before beginning to draw deductions; certainly the process is not so lively as that of turning out a new-fledged "theory" every year, and a long, if ill-digested, paper every other month; but it had the merit of leaving little to retract and little to omit, and though nearly thirty years have passed since first this book appeared, we do not think that the editor has found much that has had to be

BRITISH DENTAL ASSOCIATION.

omitted or retracted, on the ground that it has since been proved to be unsound. The other cause which has contributed to the preservation of the original character of the book, in spite of frequent fluctuations of opinion and practice, lies in the treatment of purely operative dentistry. Mr. Charles Tomes has displayed his usual good sense in coming to the conclusion that operative dentistry is not "to be learnt from descriptions, however detailed." Of course it cannot, any more than boxing or sleight of hand can be learnt from descriptions. Mr. Tomes has, therefore, limited his treatment of this department to the enunciation of general principles, and has left the acquirement of the manipulative skill and dexterity to their only proper place, namely, the operating chair, and we believe every sensible practical man will approve his decision. Neither is the work burdened with long lists of illustrations of various instruments borrowed from the catalogues of the dépôts, and filling valuable space to no possible advantage. As Mr. Tomes justly observes, everyone has his own fancy upon this point, fashions are incessantly changing, and it would be both impossible and undesirable to keep a book up to date in such particulars, and it might have been added that the circulars and catalogues of the dépôts contain everything of this sort, and always keep pace with invention and improvement in things mechanical.

The present edition then retains in the main the original form and character of its predecessors, but in perusing its pages no one can fail to be struck with the immense changes that have come over dentistry since 1873. The chapter upon caries alone affords abundant evidence of the large amount of work that has been done in the last dozen years. In the edition of 1873 the discussion of the various theories concerning the etiology of the principal dental disease was relegated to an appendix; it is now, however, incorporated in the text, and occupies no less than forty pages. It need hardly be said that these forty pages contain an able summary of the various conflicting opinions upon the question, all sides are represented with perfect impartiality, and here as elsewhere in this edition, a great deal of space is devoted to American observers, and even Dr. Abbott, whose mode of investigation is so very different in every respect from the methods of Mr. Tomes or his father, enjoys an ample hospitality. Three pages are devoted to the Bridgeman theory and the dead horse is duly thrashed (surely we need not consider the recent ludi-

crous attempt to revive it as a sign of renewed vitality), in a future edition we hope it may be allowed to rest in peace; we can quite understand how Mr. Tomes' fingers itch to have at it again, but we think it may now fairly claim the privileges of a corpse—*de mortuis nil nisi bonum*. While discussing this chapter we may fairly express a doubt whether many modern microscopists will quite endorse Mr. Tomes' statement, that the figure on page 242 (carious enamel, after Dr. Abbott) "faithfully represents the appearance of carious enamel;" we have no doubt that it faithfully represents what Dr. Abbott saw, but we have a strong suspicion that with an achromatic condenser, a properly adjusted eye-piece, and a large aperture, most of the mysterious structure would have disappeared, showing how very delusive it is to figure appearances due to the use of a restricted aperture. The views of Leber and Rottenstein, Underwood and Milles, and Miller, which have formed the nucleus of a great deal of interesting recent observation are concisely and clearly laid before the reader, and altogether Mr. Tomes has condensed an immense amount of information on the subject into the allotted space.

In the treatment of caries one of the most interesting novelties is the now famous Herbst method of filling. The editor is well acquainted with the method and with its principal exponents, and is therefore well qualified to describe it and discuss its merits and demerits.

In the chapter entitled Absorption of the Alveoli there is a great deal of new and interesting matter concerning pyorrhœa alveolaris, and also a number of cuts borrowed from various admirable treatises, by Mr. Bland Sutton, illustrating the comparative anatomy of absorption of the alveoli. Mr. Bland Sutton's researches into comparative dental pathology have done so much to widen our views of dental disease, and to add to our evidence upon vexed points the support of analogy, that it is with unfeigned satisfaction we find that Mr. Tomes has made a liberal use of his work.

It would be impossible in this Journal to refer to all the alterations and improvements that have resulted in the present volume, but one important change demands special notice; and that is the omission of the anatomical chapter and the curtailment of the description of development. The publication of the Manual of Anatomy has rendered the anatomical chapter in the surgery quite superfluous, and it is therefore very wisely omitted; but with

regard to the curtailment of the account of development, we think a full and unabridged statement of Sir John 'Tomes' early observations should exist somewhere, and we shall look forward to seeing the corresponding chapter in the Anatomical Manual expanded in a future edition.

We cannot close our remarks without expressing a regret that so valuable a standard book should not have the advantage of more frequent re-editing. The publishers ought to remember that there is a vast difference between the numbers of those who practise dental surgery and those who practise general surgery. The sale of a purely dental book must of necessity be slow, even if every dentist worthy of the name were to be a purchaser. The book suffers immensely by being issued in such a large edition that it cannot possibly be sold out before it is in many respects out of date; intervals of fourteen years are inordinately long to intervene between editions of a work of this sort, and it would be in the interests of author, publishers, and public if a smaller edition—perhaps half as large—were issued, and the work subjected to more constant revision. We trust that the numerical increase in our body may have an enlivening effect upon the sale of this edition, and that we may not have to wait till the year 1901 for another. We have already exceeded the space that should be devoted to a review, and we will therefore conclude by congratulating Mr. Charles Tomes upon the manner in which he has discharged the arduous duties of re-editing and almost re-writing so important a work, and by advising our readers one and all to install the book on their bookshelves at once and digest its contents at their leisure.

The Medical and Dental Registers for 1887.

WE have received from the Registrar (General Medical Council Office, 299, Oxford Street), copies of the Medical and Dental Registers for 1887, and we would call our readers' attention to the special care with which these new editions have been produced. Both of the Registers have been subjected to the most thorough revision, and no efforts spared to render them complete.

In the case of the "Medical Register," a circular of inquiry was sent to every registered practitioner at the beginning of the year, and in November voting papers were also sent out in connection

with the election of direct representatives on the Medical Council. As the result of these inquiries a great number of inaccuracies of address were discovered and corrected. In the introductory part of the volume the new "Medical Act" (1886) has been (with the older Acts) printed for the information of the profession, and a table has also been added showing the qualifications in sanitary science which have become registrable under this new Act. In addition, also, to the other statistical information usually given, a table is introduced showing the number of practitioners resident in each division of the United Kingdom. To render possible more ready reference the contents of each page, in both Registers, is now indicated by initial headings.

In the case of the "Dentists' Register" care has been taken in the introductory portion to make clearly evident in what respects the enactments of the "Medical Act" (1886) have modified the provisions of the "Dentists Act" (1878); a point which cannot fail to be of very general interest to our profession.


MINOR NOTICES AND CRITICAL ABSTRACTS.

Necrosis of the Lower Jaw; Death; Necropsy.

UNDER THE CARE OF MR. BRYANT, Guy's Hospital

From Notes taken by Messrs. ELLIOT and D. JONES.

M. H——, a woman aged forty-two, was admitted on October 12th, 1885. With the exception of erysipelas of the face, which occurred twelve months ago, and congestion of the lungs, which she had five years ago, her general health has been good. On the 20th of June last the patient complained of cold, and her gums commenced to swell almost immediately; also the salivary glands under the tongue began to swell, until at the end of three weeks they had pushed the tongue up. During this time throughout the whole day she experienced a great secretion of ordinary saliva, which however, had a strong odour. Every morning when she got up her hands felt very cold and looked pale. They, however, assumed a better appearance as the day advanced. In three weeks' time the gums commenced to swell and the teeth to loosen. In four weeks' time the swelling in the submaxillary region commenced, and had gone on increasing. About this time her medical man was called in, who said that it was a



case of necrosis of the jaw. He prescribed a strong tonic and a disinfecting gargle for her, and in a week's time the enlargement in the salivary glands subsided. No history was obtainable with regard to syphilis, mercury, phosphorus, injury, or carious teeth. She had not taken any medicine before her illness.

On admission there was a good deal of swelling about the maxilla, the skin feeling brawny and being of a dusky colour. On either side of the symphysis, below the inferior border of the bone, were two sinuses leading down to the bone, which did not appear to be quite bare, but was thinly covered with something soft. These sinuses discharged a fair amount of fetid pus. There was much tenderness about the jaw, and also great fixity, the patient not being able to open it more than an inch. She could not protrude her tongue. The teeth in the lower jaw were all loose, and the gums of both jaws and the mucous membrane over the hard palate were swollen and spongy, so as to overlap the teeth. Her breath was very fetid.

October 15th: The two sinuses are distant respectively an inch and half an inch from the middle line. Bare bone was felt on probing. Ordered boracic acid and spirit gargle, with aperients, and to take fluid nourishment.

16th.—Temperature 103.2° .

18th.—Morning temperature 101.4° ; evening 101.6° .

22nd.—During the last three days a large sinus has formed on the right submaxillary region, which leads down to bare bone. Four teeth were extracted.

25th.—Temperature last night and this morning 102.4° .

30th.—Patient was very weak, and seemed semi-comatose. She could only open her mouth slightly, and the dresser could not make out what she tried to say. Her face was dusky, although the pupils were not unduly dilated. Had a startled expression when spoken to or touched. She takes all nourishment given her. Pulse very small, rapid, and weak. Respiration laboured (through nares), 46. She passes everything beneath her. Temperature 102.4° . Right submaxillary region presented an intensely fetid, oval, phagedænic ulcer, about three-eighths of an inch deep, three inches and a quarter before backwards, and two inches above downwards, extending from the middle line to about a quarter of an inch behind the anterior border of the masseter, the skin over which was dragged down in small vertical wrinkles; its edges were slightly everted, and not red. The base presented

a large grey-black mass of shreds, not coming away easily. The attempt to remove what appeared the loosest shreds caused great pain. Superiorly the ulcer had extended just over the interior margin of the mandible, which was exposed and eroded; and posteriorly it had passed over the facial vessels; but as yet there was no hæmorrhage. In the base of the ulcer were some rounded pits, but it could not be seen whether they communicated with the buccal cavity; on holding a mirror over them, at the same time preventing escape of air through the nares, there was no sign of air coming through them. Discharge fetid and copious.

31st.—The patient had an injection last night; she slept well. She still takes a good deal of nourishment, but is much weaker than yesterday. The wound has been dressed twice each day with boracic acid and iodoform, but the wound is very fetid. Temperature 102.6°. The patient passed into an unconscious condition and died quietly.

Necropsy (conducted by Dr. Goodhart).—A partial examination only was permitted. On opening the mouth widely the hypertrophied condition of the gums was very marked. In the upper jaw it formed a thick ridge just within the row of teeth, giving the appearance of a second row. The anterior edges of the gums also overlapped the teeth very extensively. On examining the wound, a large piece of the lower jaw (right side) was seen to be necrosed; this was removed, carrying with it a few loose teeth and the altered gum tissue. It was found that there was a large piece of the lower jaw quite loose in the mouth; this was also removed, and proved to be the inner surface of the horizontal ramus of the lower jaw, as it formed a complete cast of its dental arch. The muscles beneath the tongue and soft parts forming the floor of the mouth were sloughing. The lungs were not examined, but the patient probably died of septic pneumonia. A section of the hypertrophied gum had the appearance of inflammatory tissue.—*Lancet*.

Right Upper Canine Tooth Removed from the Left Orbit of a Child.

BY JOHN WARD COUSINS, M.D. LOND., F.R.C.S.

SENIOR SURGEON TO THE ROYAL PORTSMOUTH HOSPITAL, AND THE PORTSMOUTH AND SOUTH HANTS EYE AND EAR INFIRMARY.

A WELL-NOURISHED child, aged two years, came under my care in May, 1886, with a hard tumour, about the size of a filbert, firmly

fixed just within the left orbit. The tumour could be pressed inwards under the eyeball, and downwards to the edge of the orbital plate. It was deeply embedded, and required to be carefully dissected out and detached from its connections. The crown of the tooth was enclosed in a sac, and the fang was attached to the orbital plate by fibro-cartilage. On examination the teeth were found normal in position, complete in number, and well formed; and the jaws were also large and fully developed for a child of two years.

Mr. T. J. Tracey, and Mr. W. H. Kirton, Surgeon-Dentist to the Royal Portsmouth Hospital, kindly examined the tooth, and sent me the following report: "The tooth is a well-formed right upper canine belonging to the temporary set, and it is a well-developed canine for a child of two years of age."

Remarks.—Irregularity in the number of teeth may occur in either the first or second dentition, and supernumerary teeth may spring up in any part of the dental arch. In shape these teeth are generally irregular and conical, and they bear no special resemblance to any kind of normal teeth; sometimes, however, they present a definite outline and accurately resemble one of the recognised forms. Instances of supernumerary incisors, canines, and bicuspid have been recorded, but examples of ill-shaped teeth, without possessing the characters of any special form, are of frequent occurrence in dental practice. As regards the time of eruption, supernumerary teeth are always irregular. They are generally matured long before the appearance of the permanent set, but their exact relation to the normal teeth is not well defined; they may be freaks of development in connection with either the temporary or permanent teeth. A normal permanent and a supernumerary tooth sometimes seem to hold the same relation to each other as the teeth of the first and second dentition. In my case there was no irregularity of the teeth, but the age of the patient, and also the special characters of the tooth, clearly indicate its relation to the deciduous set.

Cases of misplaced teeth, in strange situations, have often been recorded. These irregularities, however, are not associated with any special shape of jaw, or deficiency of size in the dental arch. The teeth are generally found to occupy an inverted position on the bone to which they are attached. They have been erupted in the hard palate and in the nares, but I have been unable to find an instance on record of a tooth appearing in the orbit. The

occurrence of a right upper canine in the left orbit is certainly a singular feature in my case, and this crossed displacement must have taken place at a very early stage of embryonic life. The canine papillæ appear in the primitive dental groove about the eighth week ; and soon after the rudimentary pulp of the milk teeth are in rapid formation within their follicles on the edge of the jaw. At this period, a supernumerary follicle and its contents could be very readily displaced from the lip of the primitive groove, as the surrounding tissues are soft, and the rudimentary orbit and the gums are in close proximity. A supernumerary tooth-sac must always be especially liable to dislocation ; and when once it gets out of the groove it may be pushed in any direction during the formation of the surrounding structures.—*British Medical Journal*.

A New Idea in Section Cutting.

IN the current number of the Journal of the Royal Microscopical Society, there is an exceedingly interesting article by Drs. H. J. Johnston-Davis, F.G.S., and G. C. J. Vosnaer, on "A new Process for Cutting Sections of Structures, containing Soft and Hard Tissues." The objects which specially occupied the attention of the essayists were sponges, in which a "very complex intermingling of hard and soft substances of entirely different chemical as well as physical properties, baffled the investigator, a remarkably delicate protoplasm enwrapping minute granules of a siliceous nature. The difficulty is so similar to that encountered in the effort to produce good sections of teeth with pulp, &c., *in situ* and unaltered, that the ingenious process deserves a full description in our Journal. It was obvious to the authors that it would be necessary to equalise the hardness of the two tissues, and that this result would be best attained by some process which should harden the sarcode, until it could be cut without injury by the same mechanical means as the siliceous spicules. The method finally arrived at possessed the following advantages:—it rendered the protoplasm sufficiently hard to be treated as fossil sponge ; it did not destroy histological details more than a paraffin embedding ; it permitted the making of sections of unlimited size : every object, fixed or not, remained in its place. The sole objection was that it was tedious and required patience and skill. The materials required for this

process are canada balsam dissolved in benzole, a thick and a very thin solution, hard balsam such as is used in cutting rock sections, a grind stone with a flat side, and a good sized hone ($2\frac{1}{2} \times 1\frac{1}{2} \times 8$ in.), a solution of soap in equal parts of alcohol and water, and a small stream of clean water.

It will be well to give the author's account of the manner in which they deal with a sponge; certain modifications will of course suggest themselves in applying the principle to dental tissues.

The object having been hardened in absolute alcohol, slice is cut about two to five lines thick, this is, after staining, returned to absolute alcohol and a few drops of benzole added; after an hour some more benzole, and so on. The next day the object is

placed in pure benzole. If the benzole is added too quickly the object shrinks and is spoiled. From the benzole it is either transferred into the benzole balsam solution, or lumps of balsam are added to the benzole bath in which it was, the quantity of balsam is thus gradually increased.

After the object is well penetrated, it may be dried in the air for one day, and then transferred to a hot-air bath, as shown in Fig., where the tissues are thoroughly penetrated by balsam they may be allowed to completely dry up and may even be exposed to a temperature of 80° C or more. Usually after some days the object if not very large is ready for grinding, but it is necessary that the balsam should thoroughly permeate the tissue and if it does not, more must be added. To prevent cracking the temperature should be slowly lowered towards the end of the drying process.

During the grinding process the addition of the soap solution will prevent the stone from clogging, but the quantity must be carefully regulated, for if too much balsam is removed the section will be cloudy, when, however, the section catches on the stone, and little rolls of balsam form, this is an indication for more soap solution. When the desired thinness is attained (for the details of the grinding process in the case of sponges, we must refer our readers to the original article), the section is thoroughly washed in water with a brush and spontaneously dried. When dry it is washed with chloroform, benzole or turpentine and finally mounted in balsam.

The oven for heating consists of a brass box lined by asbestos cardboard, the bottom consisting only of the latter material; in other respects the drawing sufficiently explains its structure and use.

Rhythm in Life.

In the March number of the *Dental Cosmos* will be found a paper by Dr. Line, of Rochester, New York, which, despite the enigmatical title, "Rhythmic Character of Functional Activity in Teeth," will well repay perusal. After some more or less mysterious generalities and quotations from Spencer to show that functions in general are rhythmical, he settles down to show how the life of a tooth, like that of a star, is a jerky existence; light waves undulate, so do lathes and planers, electricity pulsates,

nothing is strictly continuous, and even (despite the statements to the contrary that are scattered through the advertising pages of dental literature) the burring engine itself runs irregularly. This to the believers in continuity must have been the last straw that broke the camel's back. However, though the writer delights in quaint illustrations and similes, they are always striking and to the point; though he secured the praise of Dr. Atkinson, yet he was perfectly plain and intelligible to the ordinary reader (we must, however, take into account that this praise was bestowed not on the whole paper, but qualified with, "what I can understand of it"). There is no doubt that this rhythmic element is of great importance in the life of teeth, and, perhaps, there is no more striking instance of the fact than the manner of their eruption. The concluding passage of the paper is, perhaps, the most quaint in style and represents facts that are often forgotten, the recognition of which led Sir Henry Thompson to some wild and extravagant conclusions published in a Society Journal. We cannot refrain from quoting a portion of this conclusion, and a good many of our readers will, we think, share our wish that it may not be long before we read something more from the same pen.

"Sooner or later teeth must go, and if not broken down and carried off by that combination of forces known as caries, they are uprooted or forced from their places in the jaw by that other combination, the leading signs of which are absorption of the alveolar process and recession of the gums. This is what does occur, and seems to be about what should occur. We hear daily, and members of our profession are by no means few who do not, at least in meeting, voice the same notion, that the teeth of man should serve at least the traditional three score years and ten, and go with him to his grave. This thing is not expected, even by dentists of other parts of the body, and pray why should teeth be made an exception? Eyes see less clearly, ears fail to catch certain sounds, finger-ends are less sensitive than formerly, and misinterpret or confound the objects of contact; the brain wearies with less and lighter work, the heart skips a beat and stumbles in its daily routine, the stomach falls from lobster-salad at midnight to oyster-broth at noon, the liver grows torpid and sleeps anon, and the kidney instead of shedding water passes a stone,—all of which means that organs, systems, and other combinations of parts of the organism, have their day—their rise and fall; that it is an unsteady climb to the summit of their growth, their devel-

opment, strength, utility, in a word, their functional activity, and having reached that summit there seems to be little else for them to do but go down the other side in the same unsteady fashion, and at the bottom of the decline pass into that diffuse state that makes for others' good."

Effects of Cocaine.

By JAMES A. MYRTLE, M.D., C.M.

THE perusal of Mr. Steer Bowker's note, in the Journal of March 26th, on the toxicological symptoms following the application of cocaine for the extirpation of the eyeball, induces me to lay before your readers two exceptional cases which I have watched with much interest. Mr. R. C., aged 69, consulted my father nine years ago on account of neuralgia of the right facial nerve; the pain sometimes attacked the superficial branches, sometimes those supplying the gums and mucous membrane of the cheek and lip; it speedily became of the epileptiform or convulsive type, and defied all remedies. My father sent him to Mr. John Marshall in 1884, with a view to division of the nerve-trunk, but this was not thought advisable, and he was treated for gout (gout being both hereditary and acquired). Little benefit followed. Drs. Broadbent and Gowers at different times also saw Mr. C.; *cannabis indica*, *belladonna*, *quinia*, *arsenic*, *iodides*, *bromides*, etc., all failed in turn. At last we tried cocaine in a 5 per cent. solution to the gums and mucous membrane, with menthol and olive oil in equal parts to the skin of the cheek and outer angle of the jaw, with the most successful results. Gradually we had to increase the strength of the cocaine to 25 per cent., and this invariably affords almost immediate ease; the attacks are becoming less and less frequent and severe; great care is taken that none of the solution is swallowed.

Mr. W. H. W., aged 45, suffering from neuralgia of the lower end of the gullet, strongly neurotic, consulted my father eighteen months ago on account of severe pain three inches above the stomach, induced on taking certain articles of diet both solid and liquid. The pain is so great that eating and drinking are dreaded; it radiates from the original site over both sides of the thorax. Ordinary remedies failing, half-grain doses of cocaine in a tablespoonful of water were given a quarter of an hour before meals.

The first dose afforded complete relief, but was followed by great excitement ; the patient felt compelled to laugh and shout, told funny stories, and behaved in the most absurd manner in the billiard-room of his club, although feeling perfectly sober ; this continued for three hours ! he then went to the chemist's, and asked if a mistake had been made in compounding his medicine. There had been no error, so he took a second dose with a like result, and persevered for three days. Finding that the pain was completely under control, he then gave it up on account of its causing dyspepsia. Since taking it, however, the neuralgic pain has never been so bad, and he can eat and drink things now which formerly he dared not venture on, and the thoracic pain has never returned.—*British Medical Journal*.

Cocaine Poisoning.

IN the *Saint Louis Medical and Surgical Journal*, Dr. McIntyre records the following case of cocaine poisoning. The patient, a well-built man, aged 40, was found, as pale as death, lying on the doorstep of his shop. His pupils were much dilated, and the conjunctiva insensitive ; respiration was slow and difficult ; the pulse was 140. The patient was unable to articulate, but frequently made signs for water, which was scarcely placed in his mouth when it was rejected, as he could not swallow it. He had fallen into this state owing to a hypodermic injection of three centigrammes of cocaine twenty minutes before. Dr. Nichols, his ordinary medical attendant, had already, on several occasions, given him hypodermic injections of from three to four centigrammes of this drug, repeating them every half-hour until twenty centigrammes had been administered ; and he was therefore much surprised to see one dose produce symptoms of poisoning. The patient was a very intemperate man, and the injection was given as a remedy for the after-effects of drunkenness. Dr. Nichols, who had had a large experience in the use of cocaine in depression following intoxication, said that its effect was to destroy for a time the desire for alcohol. In the present case the treatment consisted of morphine and alcohol in repeated doses. The patient was in a serious state for some time, but gradually recovered. At the end of four hours he was able to be taken home in a carriage, and fourteen hours after the injection he was quite well.—*British Medical Journal*.

Alveolar Ulceration in a Child with General Tuberculosis.

AT a recent meeting of the Pathological Society of London, Mr. Jonathan Hutchinson, jun., showed some specimens of Alveolar Ulceration and General Tuberculosis, obtained from a child aged two years, who died while under the care of Dr. Stephen Mackenzie. When twelve months old she had had measles, and subsequently became cachectic, and for a considerable time had suffered from ulcerative stomatitis, or "putrid sore mouth," which had caused several of the lower teeth to fall out and had invaded the lower lip. At the necropsy the peritoneum and abdominal viscera, especially the liver, were found to be the seat of miliary tuberculosis. The tubercles were disseminated throughout the liver, and in its capsule occurred as minute elevations one-tenth of an inch in diameter; they appeared to be of recent formation, though slight caseation had occurred in a few. It was uncertain whether any casual relation existed between the stomatitis and the tuberculosis, as the latter was a rare complication, nearly all the cases of ulcerative stomatitis in children recovering under the use of chlorate of potash or other treatment. Nor did sections of the affected gums and lip show tubercle bacilli or any tuberculous structure. The surface of the ulcers was ragged, and for a varying depth was in a necrotic condition, the structures being ill-defined and not staining well. In the lip the muscular bundles next the surface were matted together, and the striation was indistinct. Micrococci were plentiful in this layer, but the long bacilli found by Lingard and Batt in ulcerative stomatitis of calves and in a case of noma were not present. Under the necrotic layer there was considerable inflammatory cell-effusion. It was stated that ulcerative stomatitis of children could be inoculated (Bergeron), but the microscopical appearances would confirm the clinical evidence that this disease was quite distinct from noma and from the ulcerative stomatitis of calves and other young animals. Mr. F. Treves said that there were many arguments in favour of the suggestion that the ulcerated tongue was the seat of inoculation of tubercle.—*Lancet*.

. International Medical Congress.

WE have received from the Committee of Arrangements, of which Dr. A. Y. P. Garnett is the Chairman, and Mr. C. H. A.

Kleinschmidt, Secretary, the following memorandum of the rates of transport and hotel rates in Washington, for the information of persons desirous of attending the ninth annual meeting of the Congress.

Rates of Transport.

Red Star Line, 100 dollars ; Antwerp to New York and return.

Inman line, 100 dollars ; Liverpool to New York and return.

Hamburg Line, 90 dollars ; Hamburg to New York and return.

Royal Netherlands, 80 dollars ; Amsterdam to New York and return.

North German Lloyd, 187.50 dollars ; Bremen to New York and return.

Same rates are allowed for the families of members.

Cunard Line 10 per cent. reduction for members of the Congress only.

Hotel Rates in Washington.

Arlington Hotel from 3.00 dollars to 3.50 per day.

Riggs House from 3.00 dollars to 3.50 per day.

Willard's Hotel from 3.00 dollars to 3.50 per day.

Metropolitan Hotel 3.00 dollars per day.

National Hotel 3.00 dollars per day.

Other hotels conducted on the European style will furnish rooms at 1.00 dollars to 2.00 a day. Good lodging houses will also furnish rooms from 1.00 dollars to 1.50 a day.

Proper accommodation has been secured for the meeting places of the Congress and its sections.

The arrangements for transport within the limits of the United States have not yet been determined upon, but will, with particulars of the plan of entertainments and other notices, be made known at a later date.—*British Medical Journal*.

The Teeth of Louis Quatorze.

IN the *Union Médicale* for April 2nd appeared an interesting article by Dr. T. David, entitled "Des Dents de Louis XIV." It is founded on the reports which were drawn up and carefully preserved by that monarch's physicians and dentists. Louis XIV. whose father died of phthisis ; who suffered from fistula in his youth ; who was addicted to exhausting pleasures ; who was perpetually exposed to all kinds of mental annoyance ; and who certainly performed a large amount of hard work, happened,

nevertheless, to live through the longest authentic reign ever recorded — namely, seventy-two years. His teeth were very unsound, and, before middle age, all those in the upper jaw had been lost or reduced to carious stumps. As the King had a large appetite, and could not masticate his food, he was subject to severe dyspepsia. Throughout the whole of the memorable year 1685, he suffered from osteitis of the upper jaw, following the extraction of a stump, with suppuration in the antrum and decomposition of the pus. On one occasion the carious alveolus was touched fourteen times in one day with the actual cautery. Dr. David concludes by pointing out that the Great King had, in this illness alone, quite enough to try his patience; and it is not surprising that some persons have suggested that to this dental affection may be attributed the evil state of mind which caused Louis XIV. to sign the revocation of the Edict of Nantes in November, 1685.

Important to Medical Students.

AT a meeting of the Committee of Management of the Examining Board in England by the Royal Colleges of Physicians and Surgeons, on April 25th, it was resolved: "That, to enable students who commenced their professional education before October 1st, 1884, to pass a qualifying examination for the purposes of registration, students who shall have completed four years of medical study to the satisfaction of the Committee of Management, and who shall have passed such first and second examinations as that Committee shall approve, may be admitted to the final examination of the Examining Board in England, which is a 'Qualifying Examination' for the purposes of registration under the new Act." Students desirous of taking advantage of this resolution of the Committee of Management must make application in writing to the Secretary of the Examining Board in England, giving full particulars of any examinations passed by them at the two Colleges or elsewhere.—*British Medical Journal*.

OBITUARY.

John Chatto, M.R.C.S., L.S.A.

LIBRARIAN TO THE ROYAL COLLEGE OF SURGEONS.

WE believe that there are very few medical men whose student days have fallen in the last thirty-five years, who will not feel a sense of personal regret at the news of the death of Mr. Chatto. His unbounded learning was always at the service of anyone who sought to avail himself of it, and the pages of our Association Journal have very often benefited by his assistance and advice, he took a special personal interest in our Journal, and was always on the look out for matter for our pages, which might have escaped a less omnivorous reader. Mr. Chatto was born in 1809. Throughout life he was before all things a scholar, and early in his career devoted himself to literature, and throughout the existence of the *Medical Times* he was a constant contributor to that journal. In 1853 he was appointed librarian to the College of Surgeons and for thirty-four years most conscientiously discharged the duties that devolved upon him. Many of the best writers upon medical subjects are deeply indebted to his wide acquaintance with all medical literature, and never failing memory in the production of their works, and his advice and assistance will be much missed in the scientific department of our JOURNAL.

ANNOTATIONS.

CONTRIBUTORS will greatly oblige the Editor if they will comply with the request which has for some months appeared on the last page of the Journal, and direct their MSS. to 11, Bedford Square, instead of Leicester Square, much time would be saved thereby and the matter would reach at least a day earlier.

IN our obituary notice this month we record the death, in the fulness of years, of one who has fulfilled a long life of valuable labour. We have to record, however, a still sadder event, for it can scarcely be doubted that it is a fact that one of the most brilliant men of his year, just entering upon a career that could not fail to be successful, has been suddenly cut off in the recent fatal shipwreck off Dieppe. Among the missing in the "Victoria" disaster is Mr. Frederick A. T. O'Meara, formerly a student at the

London Dental Hospital. He was the son of Mr. Alfred O'Meara of Simla, one of the leading dental practitioners in India, and was born in 1864. He began his professional studies in 1880, when he was articled to Mr. Oakley Coles. In 1881 he entered the Medical Department of King's College, London, and at the end of his second winter took the senior prize in anatomy. In 1883 he studied for a short time at the London Dental Hospital; but he found that he had become so interested in medicine and surgery that he decided to devote himself to general practice and not to take up dental surgery. At the end of his third year he took the prizes for surgery and obstetrics, medicine, and also the special Tanner prize for diseases of women. In October, 1885, he received the double qualification of M.R.C.S., L.R.C.P., England, and next year became assistant house accoucheur at King's College Hospital, subsequently becoming house accoucheur. Next session he was to have been Sir Joseph Lister's house surgeon, and it was to recruit his health and so prepare himself for his new work that he was crossing over to France for a short holiday, and to meet his parents (who, returning from India, had also met with the misfortune of shipwreck in the *Tasmania*) when the terrible disaster closed his brief but brilliant career.

The Lancet (April 23rd) agrees with us that the public "attach considerable importance to the title of 'Dr.' amongst dentists," and they therefore feel it their duty to point out that the term, used in virtue of the D.D.S., does not signify any medical qualification, and, when honestly obtained, is similar, and by no means superior, to our L.D.S. We are heartily glad to see that the Americans are awakening to the fact that their degree is fast falling into disrepute, and only last month a "diploma mill," with the title of "Druidical University of America," had its charter repealed; but it is not only these illicit manufactories that need looking after but the recognised universities where diplomas are given after a few weeks' residence. There is no doubt that the public will learn to discriminate, and we rejoice with our contemporary in the fact, that there are not wanting signs that the awakening has commenced.

THE International Congress in America is fast approaching, and we would once more reiterate the suggestion that intending contributors on this side of the Atlantic should, without delay, forward

particulars of their proposed contributions to the Secretary of the dental section. These particulars should, if possible, reach the Secretary by the end of the month. The disagreements that threatened at one time to overwhelm the whole undertaking have happily been adjusted, opposition has been conciliated, and everything promises well for the undertaking. As regards the visitors from this country, events have occurred within the last few weeks which will undoubtedly have their effect upon the harmony of the meeting in September. An act of international sympathy and kindness forms a fitting prelude to an international congress, and the spontaneous outburst of fellowship that found expression in the kind suggestion of Dr. Barrett, of Buffalo, and the prompt and practical response of the leading American practitioners to his suggestions is indeed a happy omen for the Autumn meeting. The distance from England to America has grown sensibly less since the Waite testimonial, and we hope the meeting at Washington will still further diminish it.

A MASS meeting of dentists has been held in America to consider the propriety of holding an International Dental Congress in 1888-9. The meeting was about 700 strong, and the feeling was in general in favour of a congress. We have already expressed our own opinion on this matter more than once; we have never considered the proposal advisable. Under any circumstances, however, it would run a great risk in the present case of suffering from the immediate proximity of this year's congress. The scheme is so far in embryo, and perhaps it will be as well to postpone any discussion of its merits until it has become more defined and matured.

The British Medical Journal (May 7th), state that they understand that Messrs. Henderson Brothers, managing owners of the Anchor Line of Steamships from Glasgow to New York, have decided to offer to members of the medical profession desirous of attending the International Medical Congress at Washington in September next, return tickets to New York for £20, giving their best accommodation at this low rate.

WE have received from Brighton the account of a meeting in connection with the Brighton Dental Hospital on the 26th of last month, when the staff came together to wish "bon voyage" to

one of their colleagues, Mr. Edward T. Ash, on the event of his departure for South America, where Mr. Ash is about to enter into a partnership. Mr. O. A. Fox presided, and although Messrs. W. R. Wood, junr., S. P. Johnson, C. B. Stoner, and W. J. Stevens were unavoidably absent, the majority of the staff were able to testify to the unanimous regret that Mr. Ash's colleagues felt in losing him. This regret, as Dr. W. Harrison, who opened the proceedings, and Mr. Fox explained, was tempered by the satisfaction of feeling that their colleague was, if health were vouchsafed to him, probably destined to enjoy a successful and happy career in the new world ; as he had worked well for them so he would work well elsewhere. An illuminated address, expressing the gratitude of the staff for his past services and their good wishes for his future success, and signed by Messrs. O. A. Fox, D. E. Caush, W. R. Wood, junr., John Wood, S. P. Johnson, C. B. Stoner, and W. Harrison, was then presented to Mr. Ash, and after some further expressions of cordiality from those present the meeting dispersed.

AN ordinary meeting of the Dental Student Society, National Dental Hospital, was held on Friday, May 6th. Mr. Henri Weiss in the chair. The minutes of the previous meeting having been read and confirmed, notice was given of a set of rules to regulate the library and museum, both of which were now thoroughly established features of the Society. Mr. Rymer then drew attention to a condition in the mouth of a boy, aged 18, where there appeared to be an absence of development of the front portion of the inferior maxilla and the tip of the tongue. But for the want of a reliable history the discussion was postponed, to ascertain if at any period he had suffered from necrosis or had received an injury to the part. After a number of interesting models and tooth specimens had been handed round Mr. Alfred Prager read a paper on "Art in Relation to Dentistry," in which he urged his hearers to observe the great importance to be attached to the expression of the face by the arrangement of the dental work, either in the regulation treatment or by the artificial substitute. He cited, as examples, the various expressions obtained by the great masters by the disposition of the mouth and teeth, and pointed out that with the same features a change could easily be produced from one of the highest intelligence to that of idiocy, and from repose to anger. After a lengthy discussion the meeting was adjourned until Friday, June 3rd.

STATEMENT of operations performed at the London Dental Hospital, Leicester Square, during the month of April, 1887.

Number of patients attended	2391
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Extractions :

Children under 14	443
Adults...	992
Under Nitrous Oxide...	772
Gold Fillings	256
Other Fillings	...	...	...	638
Advice and Scaling...	181
Irregularities	102
Miscellaneous and Dressings	423

Total	3807
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R. WYNNE ROUW, *House Surgeon.*

STATEMENT of operations performed at the Birmingham Dental Hospital, during the month of April, 1887.

Number of Patients attended	...	...	...	1036
Gold Fillings	...	...	...	14
Other Fillings	...	...	...	49
Temporary Fillings...	...	...	...	121
Irregularities	6
Miscellaneous	112
Anæsthetic cases	30
Extractions	890

Total	2258
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STATEMENT of operations performed at the Brighton Dental Hospital (established July, 1886), from January to March, 1887.

Patients admitted	...	...	...	303
Extractions ...	...	...	...	234
Extractions under Anæsthesia	...	...	...	30
Fillings	65
Regulations and Miscellaneous cases	177

Total operations	506
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WALTER HARRISON, *Hon. Sec.*

The next meeting of the Odontological Society will take place at its rooms, 40, Leicester Square, W., on Monday, June 6th, at 8 p.m. Business.—Casual Communication, by Mr. F. Henri Weiss, on the destruction of a permanent tooth pulp by an alveolar abscess attached to a deciduous molar. Paper, by Professor Victor Horsley, F.R.S., on "Epileptiform Neuralgia of the Fifth Nerve, treated by Evulsion of the Nerve."

THE Annual General Meeting of the National Health Society was held at 44, Berners Street, on the second of this month. The report showed that a great many more health lectures had been given in the poorer districts of London during the past year than during any previous year.

THE subject of "health" can hardly be adequately discussed without a certain amount of attention to the dental aspect of the question, and one of the results of Messrs. Fisher and Cunningham's crusade of last autumn ought to be that the consideration of dental sanitary regulations should find a place on the programme of the Health Society's lectures.

WE allow half of London to be rendered unhealthy for the want of systematic instruction in dental sanitation. Hundreds of thousands of people go about, night and day, creating insanitary conditions by means of emanations from decaying stumps, chronic abscesses, inflamed gums eaten into by tartar, and last—not least—the noxious gases formed in the stomachs of those unfortunates who, destitute of proper masticatory apparatus, cannot digest their food.

THE poor and dirty dwellers in the slums have much to learn concerning health and sanitation, and no doubt simple and long established axioms will require much demonstrating and explaining before they are brought home to the dregs of the population, and the general ignorance about the teeth would form a capital subject for an energetic and enthusiastic philanthropist.

WE all know what the results of tartar are, yet we would venture to say that tartar exists to a very detrimental extent in the purlieus of London in the mouths of the uncleanly poor, and thereby not only they themselves are injured in health but the very air is ren-

dered less fit for respiration, and a more efficient medium for the spread of disease.

THE effect may be seen in the greeny-white faces, the dwarfed stature, sunken chests, sore eyes, and rickety limbs, that people these districts. The boon of model dwelling-houses might with advantage be combined with the introduction of tooth-brushes and instruction how to use them. If the lowest strata of society could be restored to the blessings of cleanliness and a good digestion, many grievances would disappear of themselves, and the life of London would be healthier and happier.

WE would urge, then, upon the consideration of the Health Society that their scheme is imperfect if the mouth—the greatest factor in the relative impurity or purity of the body—is allowed to remain in an unwholesome condition. Of course, all our readers know this well enough, but the people whom it greatly concerns have no idea of it whatever, and it should be brought home to them in a practical form, and the sooner the better.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following Candidate passed the First Dental Examination at the April Sitzings of the Examiners:—John A. Biggs, Glasgow. The following Candidates passed the Final Examination, and were admitted Licentiates in Dental Surgery:—William Holt Woodburn, Glasgow; Thomas Holroyd Wood, Bolton.

WE are requested to state that Mr. Lyddon, L.D.S.Eng., Member of the Odontological Society, &c., of Reading, has joined Mr. Cox, L.D.S.Eng., Member of the Odonto-Chirurgical Society, &c., of Jersey, and will shortly succeed him, and that Mr. S. Aveline has succeeded to the practice of Mr. Lyddon, at Reading.

THE Scottish Branch of the British Dental Association will hold its annual meeting for the election of office bearers, &c., on Friday, the 3rd of June.

THE meeting will take place at Newhaven, an ancient and picturesque fishing village on the Firth of Forth.

THE members will transact business in the Peacock Hotel at six p.m.

AT seven p.m. members and friends will proceed to partake of a "Fish Dinner," for the cooking and serving of which dinners the place is famous. Dinner tickets, inclusive of wine, 7s. 6d.

THE Summer Session of the Edinburgh Dental School opened on the 3rd of May with a good attendance of students, but few new entries.

WE hear that Mr. J. S. Morgan has withdrawn the condition attached to his promise of £10,000 in aid of Guy's Hospital, and made it an absolute gift.

AN Intercolonial Medical Congress is to be held at Adelaide, from August 30th to September the 2nd of this year, Dr. Vercot is to be President. Several sections have been defined, but a dental one is not among them.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

Transplantation of Teeth.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Thinking that the enclosed correspondence (four letters on use of human teeth for transplantation) which appeared in one of our local papers, might interest your British dentists, I send them, in the hope of seeing them appear in your paper, with the object of eliciting information on the subject.

You will observe in Letter No. IV. the editor's remarks, viz. : "This must close the correspondence. The statement from which it originated was made by the Paris correspondent of *Truth*, who was not likely to have written at random." From this you will perceive that he, like his correspondent, A. Munsfeldt, in Letter No. II., has fallen into error, in making it appear that the Paris correspondent of *Truth*, was speaking of replantation of teeth, when in fact it was in reference to full or partial cases of artificial teeth, fixed on a base, *removable at will*, made from human teeth, by Dr. Evens the American dentist, in Paris.

The editor of *Cape Times* has, unknowingly, gratuitously advertised a person who is evidently anxious to seek notoriety, which was not my object when I wrote No. I. letter, but solely for the interests of the

profession, and to prevent fastidious persons being prejudiced against the use of artificial teeth fixed on a removable base.

I shall be glad to know what you think, or some of your correspondents have to say on the subject, and particularly as to the replantation of teeth being a new American patent.

I am, &c.

L.D.S., R.C.S.I.

Cape Town, 20th *April*, 1887.

NO. I.—PROSTHETIC DENTISTRY.

Cape Town, April 5th.

To the Editor of the Cape Times :

SIR,—On reading your London letter by the last mail your correspondent, writing about the great scare caused by the earthquake in France, alluded to the ghastly appearance of a certain distinguished lady, owing to her being without her set of artificial teeth, made, it was stated, by Dr. Evens (an eminent American dentist) of Paris, who had extracted the teeth from the mouths of a number of Normandy girls for the purpose of making the case. Your correspondent evidently must have been misinformed, or has, in the absence of knowledge concerning modern dentistry, drawn largely upon his imagination, for the following reasons :—(1) No enlightened dentist would think of robbing poor unfortunate girls of their natural teeth, when far more durable and equally as natural looking ones may be obtained by millions at any first-class dental dépôt in Paris, London, New York, Berlin, &c., &c. ; (2) human teeth extracted from the skulls from battle fields or living subjects, used by dentists twenty-five or more years ago, were found just as liable to decay as those in the natural state ; and modern dentists knowing this, and the chances of inoculating their patients with venereal and other contagious diseases, would no more use human teeth than you would think of going to England in a flat-bottom boat. Artificial teeth of endless variety are now formed of feldspar, quartz, and kaolin, are indestructible, perfectly free from all objections, and, if scientifically and artistically adjusted to suit each individual case, are really what dentists assert, viz., perfect substitutes for the loss of the natural teeth.

I am, &c.,

L.D.S., R.C.S.I.

NO. II.—TEETH TRANSPLANTING.

Cape Town, April 9th.

To the Editor of the Cape Times :

SIR,—In to-day's issue of your paper I note a letter headed "Prothetic Dentistry," and signed "L.D.S., R.C.S.I.," in which the writer asserts that it is not customary for dentists in general, or eminent American dentists, to use human teeth extracted from country girls

&c., &c. Allow me to inform you, and the writer of that letter, that such is not only a habit which was in vogue about twenty-five years ago, but that it is actually a new American invention, to extract teeth from healthy human living skulls, and after careful manipulation, which I am ready to describe to you and your correspondent, and proof, if found necessary, to insert them into other people's mouths, where they not only grow on, but become so fastened as to look like natural ones, grown in the mouth of the person interested.

I am, &c.

A. MUNSFELDT, 12, Hout Street.

NO. III.—PROSTHETIC DENTISTRY.

Cape Town, April 15th.

To the Editor of the Cape Times :

SIR,—I have read the letter of your correspondent, Mr. A. Munsfeldt, 12, Hout Street, under the heading of "Teeth Transplanting," in your issue of the 13th inst., based upon a letter of mine under the above heading, which appeared in your issue of the 13th inst. Mr. Munsfeldt has evidently misunderstood my remarks regarding the use of human teeth for the construction of artificial teeth, which specially (as the context of my letter will show) referred to the making of dentures, *removable at will*. Re-plantation and transplantation of human teeth has been practised for ages past with more or less success, but as far as modern dentistry is concerned, the operation of transplantation (from one jaw to another) is very rarely resorted to, except in special cases, the success of this operation being doubtful and for other reasons. Mr. Munsfeldt, permit me say, is wrong in stating that "it is actually a new American invention, to extract teeth from healthy human living skulls (? jaws), and after careful manipulation to insert them into other peoples' mouths, where they not only grow on, but become so fastened as to look like the natural ones grown in the mouth of the person interested." Many American and other dentists have some particular hobby of their own, and often confine themselves to one special branch of dentistry. I am well posted with what goes on in Europe or America, but have yet to learn that transplantation of human living teeth is a new American invention. The following extract from "Manual of Dental Surgery and Pathology" (by Alfred Coleman, L.R.C.P., F.R.C.S.E., L.D.S., &c., &c., 1881), will substantiate what I have said (pages 281-2). "Transplantation.—This operation appears to have been performed at an earlier period than that which we have just considered. Some have attributed its origin to Abulcasis (died 1122), but the passage quoted in favour of this supposition refers more probably to the fixing of an artificial tooth. Ambrose Paré, however, records a case where a young princess had a sound tooth of her waiting maid inserted in the place of a carious one extracted, and with a successful result. Nothing, however, appears to

have been done in this direction for some 150 years until the operation was resuscitated by Fauchard, and with much greater zeal by Bourdett, who appears to have obtained his teeth for transplanting from Savoyard boys, whose great poverty induced them to be thus victimised." "The chief arguments employed against the operation were, as we pointed out some years ago,* viz. : 1. Liability to failure ; 2. Chance of inoculation of disease ; 3. Moral obligation." In justice to myself I trust you will find space for this letter.—I am, &c., L.D.S., R.C.S.I.

* "On the Transplantation of Teeth," by Alfred Coleman, St. Bartholomew's Hospital Reports, vol. xiv., p. 101.

NO. IV.—TEETH TRANSPLANTING.

Cape Town, April 18th.

To the Editor of the Cape Times :

SIR,—Allow me once more to address you in regard to "L.D.S., R.C.S.I.'s" letter in to-day's issue of the *Cape Times*. I gave my name and address in order to enable the writer of "Prosthetic Dentistry" to come and to see himself that my assertion as to the new invention of transplanting teeth was based upon real and simple facts ; had he done so instead of inquiring in my immediate neighbourhood what kind of a mortal I could be he would have been satisfied, and would not have taken the liberty to trespass upon your valuable space and time to-day. All what I can state now is that I still hold right what I said in my letter, and that it is of no interest for me or anybody else to argue as to for and against. The facts of 1886 speak for themselves, more so when testified by proper authorities ; for instance, Dr. Sandré, Vienna, the New York Odontological Society, Drs. Jarvis, Lord, Atkinson, Gifford, Allan, Marvin, O. E. Hill, Rollins, &c., &c., and I consider further correspondence touching this matter useless. If you, Mr. Editor, or anybody else want explanation, I am ready to give it, and support the same by producing reports of 1887, just arrived, also sketches of tools, or "chirurgical instruments" used in performing this new operation of this new invention of "transplanting teeth."—I am, &c.,

A. MUNSFELD, 12, Hout Street.

This must close the correspondence. The statement from which it originated was made by the Paris correspondent of *Truth*, who was not likely to have written at random.—ED. C.T.

Foreign Diplomas.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Your issue for January has only just arrived. If the above subject has not been already thoroughly discussed, as Mr. Todd desires, allow me to add a few words.

The question *where* a dental practitioner graduated is not I imagine,

of supreme importance if, in the most real and prolonged examination—that of the surgery and work-room—he proves well and duly qualified. If candidates in Theology, in Medicine, in special and general Surgery and other sciences, find it an advantage after their English course to continue their studies at some continental university, or it may be prefer such university as their *alma mater*, why should not the dental student enlarge his knowledge at an American school, or it may be prefer that school to any other? If to raise and secure the highest professional excellence be, as it ought to be, the chief aim, any and every educational resource will be sought and appreciated. It is natural—it is only grateful and patriotic that English practitioners and students should prefer the diploma and curriculum of their own schools and colleges; but there may be circumstances which compel or at least justify an English student in graduating at an American university, as, for instance, where a student found that his three years apprenticeship were not allowed to count as one of the four (until quite recently) required after registration as a student, and where owing to family circumstances he was anxious not to lose a year. It was owing to such circumstances (your reader will, I hope, excuse this personal reference), that one of my own sons arranged to qualify at Michigan university where the diploma of D.D.S. can now only be “earned”—to use Professor Taft’s expression, by hard work and good character. The curriculum at Michigan extends, as you are aware, through three years, but apprenticeship counts as one, and the course is for nine months each year. Harvard and Michigan are the only American colleges where the course is for *nine* months. It was possible not many years ago for an English dentist holding the L.D.S. diploma, *sine curriculo*, and deemed fairly instructed and efficient to graduate at Michigan in six months; that is not possible now, but would require two full courses. Harvard would require the same. As to the relative value and standard of English and American dental schools opinions will differ. In scientific culture and comprehensiveness, I believe English dentists hold a first position, but the American schools, at least, so far as I can judge by the Michigan curriculum, devote more attention to mechanical dentistry and to gold filling. But why should there be any animus between the two, why any spirit but that of healthful emulation and of mutual respect? The English student who graduates in America finds himself in the first place called upon to defend the English profession and practice; then, on his return to England is compelled in sheer justice to defend his American confreres and their methods. At present this experience is perhaps unavoidable, it is certainly unenviable. American practitioners are proverbially frank and generous in communicating their knowledge; their methods and practice are willingly displayed to English visitors, and they are ready to discuss and disclose all they know upon any professional topic hence, any policy of ungenerous

rivalry or exclusive legislation in England they would keenly feel and naturally resent. Prejudice, the growth of ignorance, only requires more general intercourse by periodic international dental conferences, and by travel to be broken down and destroyed. Any English practitioner who flaunts an American degree as an infallible sign of superior skill, only fosters prejudice and trumpets his own conceit; but if that degree has been gained by honest work, and by honourably passing the series of examinations required by the curriculum at Harvard or at Michigan, whilst he justly claims the title conferred by his diploma, prefers it should be given at least from courtesy, than demanded as a right.

Yours faithfully,

EDWIN COX, L.D.S.Eng.

Auckland, *March*, 28th, 1887.

Fees to Medical Men.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—The question raised in your March number and discussed by M.R.C.S., L.D.S., in last number of the Journal, is one of great importance and should not be allowed to drop without some conclusion being arrived at. I cannot help thinking that the correspondent who first "complained" of being often charged "full fees by medical men" had been most exceptionally unfortunate. I am certain that such conduct is not the rule. Moreover, I would suggest that although "the idea of reciprocity," as M.R.C.S., L.D.S. expresses it, is doubtless at the root of the whole matter, there is another idea involved of which he takes no notice. Members of the medical profession would never dream of *receiving fees from each other* for their advice, the whole matter seems to me to hinge upon whether we are or are not members of that profession, I am strongly of opinion that the fact of a man receiving a diploma from the College of Surgeons constitutes him a member of the profession, and I should regret any line of action which tends to separate us from it and brand us as a peculiar people. Of course it must be a matter in which good taste and man's own sense of what is right will be the guide, and a great deal of dental work is so expensive in time and material, and the necessity for it so frequent, that it cannot be regarded as equalised by the rarer and slighter attentions of a practitioner of medicine. Still while Dr. Kingsley across the water is alternately saying that we are and then that we are not a speciality in medicine (according to the boldness of the moment), and even in England, here and there a fossil creeps out of his shell and regrets the happy days before we committed the fatal mistake of becoming a fragment of the medical body, at such a time no encouragement should be given to anything which can foster the idea that we are something not strictly akin to the general profession.

Yours,

A DENTAL SURGEON.

Glass Tubes for Saliva Ejectors.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—We have just received the enclosed note from Dr. Clapp, of Boston, and we think that the caution it conveys should be known to as many dentists as possible. Will you kindly notice same in the BRITISH ASSOCIATION JOURNAL.

Yours truly,
C. ASH & SONS.

6, 7, 8 & 9, Broad Street, Golden Square.

April 26th, 1887.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

Messrs. CLAUDIUS ASH & SONS.

GENTLEMEN,—I notice in your quarterly circular received this morning, an advertisement of glass mouth pieces for saliva ejectors. I would like to discourage their use and sale for I believe them to be exceedingly dangerous. Once while using one of them my patient becoming suddenly faint, closed his mouth with such force as to break the tube. I found myself in the uncomfortable position of having a faint patient with his mouth full of broken glass. The desire to keep others from a similar experience is my only reason for inditing this note.

Very truly yours,
Boston, *April, 1887* DWIGHT W. CLAPP.

Lateral Movement in Articulators.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—In reply to "young practitioner" in your last issue of this journal, I would say I cannot believe that any articulator which has a lateral movement, however small, can give a perfect articulation. I regard a perfect articulation as being of more importance than a perfectly fitting plate, and in that belief have tried a good many different Articulators. I at last devised one for myself, which was described and illustrated in the British Journal of Dental Science, June 15th, 1883. The first lot of them made, had a slight lateral movement from not being accurately fitted, and consequently were useless, but when properly made, that is the only articulator which gives me *invariably* an exact articulation, and I never require to grind and spoil the back teeth.

I am, &c., J. S.

Effects of Salt on the Teeth.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I am practising in a seaside town, and I am frequently informed by patients that their teeth never decayed until they came

to reside here. I have always considered this mere coincidence, but as Dr. Palmley Browne has stated that decay of the teeth is caused by the use of common salt, I think some information as to whether dental caries is more frequent on the coast (if so, due perhaps to salt in the air) than inland would be useful. If there is anything in Dr. Palmley Browne's theory, sailors who eat much salt meat should suffer far more than soldiers.

I am, yours faithfully,
INQUIRER.

APPOINTMENTS.

C. CLAUDE ROGERS, M.R.C.S., L.D.S.Eng., D.M.D., Harvard, has been appointed Dental Surgeon to the Dental Hospital of London, vice Arthur S. Underwood, M.R.C.S., L.D.S.Eng., resigned.

GORDON HOOPER, L.D.S.Eng., 60, Wimpole Street, Cavendish Square, has been appointed Dental Surgeon to Bethlem Royal Hospital, and King Edward's Schools (Girls' division).

PEYTON LEVASON, L.D.S.Eng., has been appointed Hon. Dental Surgeon to the Herefordshire and District Working Boys' Home, and Certified Industrial School, Hereford; also to the St. Vincent de Paul Orphanage and Schools, Bullingham, Hereford.

DAVID WATSON, L.D.S., R.C.S.Eng., was elected Honorary Dental Surgeon to the London Society for Teaching the Blind, Upper Avenue Road, N.W., at the annual meeting of the Governors held at the Cannon Street Hotel, on April 28th.

MR. JOHN WOOD, L.D.S., has been elected Consulting Dental Surgeon to the Brighton Dental Hospital, vice Mr. W. L. Poundall, L.D.S., who has left the town through ill health.

C. M. CUNNINGHAM, D.D.S., Univ. Mich., and L.D.S. Edin., and E. L. Norris, L.D.S.Eng., to be Dental Surgeons to the Brighton Dental Hospital.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

DENTAL SURGERY AT THE METROPOLITAN HOSPITALS, &c.

HOSPITALS.	DENTAL SURGEONS.	ASSIST. DENTAL SURGEONS.	DAY AND HOUR OF ATTENDANCE.	ADMINISTRATORS OF ANÆSTHETICS.
St. Bartholomew's...	Mr. Ewbank ; Mr. Paterson ...	Mr. Mackrell ; Mr. Ackery ...	Daily at 9 a.m. ...	Mr. Mills
Charing Cross ...	Mr. Fairbank ...	... ..	Monday, Wednesday & Friday, 9 a.m.	
St. George's ...	Mr. Winterbottom ...	... ..	Tuesday, 9 a.m. ...	
Guy's ...	Mr. Henry Moon ...	Mr. F. N. Pedley ...	Tuesday and Thursday, 12.30 noon ...	
King's College ...	Mr. S. H. Cartwright ...	... ..	Tuesday and Friday, 10 a.m. ...	
The London ...	Mr. Ashley Barrett ...	... ..	Tuesday, 9 a.m. ...	
St. Mary's ...	Mr. Howard Hayward... ..	... ..	Wednesday and Saturday, 9.30 a.m. ...	
Middlesex ...	Mr. Bennett ...	Mr. C. Rogers ...	—	
St. Thomas's ...	Mr. Ranger ...	Mr. Chas. Truman ...	Tuesday,	
University College...	Mr. Hutchinson... ..	... ..	Wednesday, 9.30 a.m. ...	
Westminster ...	Dr. Walker ...	Mr. Smale ...	Wednesday and Saturday, 9.15 a.m. ...	
London Dental ...	Mr. David Hepburn ...	Mr. Leonard Matheson ...	Monday, 9 a.m. ...	Dr. Buxton,
" "	Mr. R. H. Woodhouse...	Mr. W. Hern... ..	Tuesday, 9 a.m. ...	Dr. Hewitt.
" "	Mr. Gregson ...	... ..	Wednesday, 9 a.m. ...	Mr. Mills.
" "	Mr. Storer Bennett ...	Mr. George Parkinson ...	Thursday, 9 a.m. ...	Mr. Braine.
" "	Mr. Claude Rogers ...	Mr. Lawrence Read ...	Friday, 9 a.m. ...	Mr. Bird.
" "	Mr. F. Canton ...	Mr. Truman ...	Saturday, 9 a.m. ...	Mr. Bailey.
National Dental ...	Mr. Henri Weiss ...	Mr. Willoughby Weiss ...	Monday, 9 a.m. ...	Mr. Glassington.
" "	Mr. Alfred Smith ...	Mr. Giles Bradshaw ...	Tuesday, 9 a.m. ...	Mr. Davis.
" "	Mr. G. A. Williams ...	Mr. Marcus Davis ...	Wednesday, 9 a.m. ...	Dr. Winslow.
" "	Mr. A. F. Canton ...	Mr. H. G. Read ...	Thursday, 9 a.m. ...	Mr. Glassington
" "	Mr. T. Gaddes ...	Mr. Scott Thompson... ..	Friday, 9 a.m. ...	Mr. Davis.
" "	Mr. Harry Rose... ..	Mr. W. R. Humby ...	Saturday, 9 a.m. ...	Dr. Winslow.

MEETINGS FOR THE MONTH.

Dental Hospital of London.—Finance Committee, June 17th, at 5.30 p.m.; Committee of Management, June 20th, at 5.30 p.m.; Medical Committee June 21st at 10 a.m.

7, June 6th, at 7 p.m.; General Meeting, at 8 p.m.

26th, at 5.30 p.m.

5th, at 5.30 p.m.

4th, at 3 p.m.

Members are reminded that their subscriptions were due in JANUARY last, and are requested either to remit them direct to the Treasurer, at 40, Leicester Square, or if more convenient, to pay them through their bankers, or through the agency of one of the Dental Depots, and so save unnecessary postage, &c., in applying for the same.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. 6.

JUNE 15, 1887.

VOL. VIII.

The Address at Chester.

It does not often happen that we are called upon to say anything in the way of criticism upon addresses delivered at the meetings of the Association or of its Branches, for we are generally entirely in accord with the feelings expressed, and there seems to be something almost as ungracious in animadverting upon the intellectual viands laid before us, as there would be in so doing upon the material feast which a hospitable welcome extended to visitors had provided. But in this instance the president of the Midland Branch has himself entered upon criticism, of some of the things which we deem most vital to the interests of the profession, and we feel that our silence might be taken as a tacit endorsement of opinions which after all are only those of the individual, though they gain an added weight

from being uttered from that presidential chair in which the esteem of his fellows has rightly placed him.

Of course every one has the liberty of his opinions, and of the expression of them, but as the writer of the address has sparred without the gloves, we must, though in all kindness and friendliness, allow ourselves an equal freedom in treatment of the subject. The argumentative portion commences with regrets over the long since defunct College of Dentists, a body which did useful work in its day, but which, like (at a later date) the Association of Surgeons Practising Dental Surgery, became defunct from a failure to be in accord with the best sentiments of its day; and even if we granted, which we do not for a moment, that the death of the College of Dentists was a matter for lasting regret, yet the sentiment seems to involve disloyalty to the Association which has placed the speaker in an official position of honour, when the whole course of action which has led to the very existence of that Association is condemned. In entering upon such a course of strictures the utmost accuracy is imperative, but what can be said of the following sentence from near the close of the address. "You have in your ranks men of science of the highest education and culture; men whom her Majesty has delighted to honour, many, who in addition to their having the L.D.S. degree, are fellows of the Royal Society; M.D.'s of the College of Physicians, &c., &c." Now we only know of four fellows of the Royal Society among the living members of the profession, and the College of Physicians has not and never had the power of granting an M.D. degree; the prevalence of this sort of looseness of statement detracts much from the influence which the speaker's utterances might otherwise carry.

A similar remark applies to such statements as that the union with the College of Surgeons was sought, because

those who entered into the work longed for their maternal leading strings, when as a matter of fact the leading spirit in that negotiation did not at that time possess the membership of the college.

In the support of the L.D.S. degree as being essential to the dentist, and as being the only one which really signifies that he possesses a competent knowledge of his profession, we are prepared to go as far as any one, but we cannot think that the dignity of the degree is at all enhanced by its being extolled indiscriminately, and still less by an attempted depreciation of the M.D. or M.R.C.S. degrees. Take the "noble lord" episode, as to which we cannot help feeling that the purposes of argument would have been as well served by the use of initials. Here was a case where there was a *prima facie* reason for caution, and it would surely have been inconvenient in the event of a fatality, had the administrator of the anæsthetic been unable to sign a certificate of the cause of death, however competent he may have been to do all that could be done for the patient's welfare. And surely if any argument can be based upon the narrative, it is quite other than that attempted to be drawn from it; it became desirable that a particular form of cardiac trouble should be diagnosed, a matter often calling for much skill in auscultation, and, if indeed a practitioner is to be called upon to accept the responsibility in such a case, it surely were well that his medical training had been carried as far as possible. Or again, take the chloroform episode, so graphically related that one might almost suppose the narrator to have been there in person; it really proves nothing at all, for the possession of the M.D. degree is not to be expected to make a man lose his head, any more than the possession of the L.D.S. ensures his keeping it; if converse was held at the time in the tone of the present narrative, we cannot help a

sneaking sympathy with the peccant M.D., who did not feel all the gratitude to the L.D.S. which he ought to have done. There is a similar want of point in the further instances which are adduced by way of glorification of the L.D.S. degree; it is of course perfectly true that the surgeon frequently wants the help of the trained dentist, for he is not a specialist and requires the help of a specialist, but this neither writes the M.R.C.S. down an ass, nor does it make the L.D.S. a demi-god.

To turn to another instance of what appears to us questionable taste, we are told that "the educated American is not a braggart": nobody said he was. The writer is not an American, and we do not think that our transatlantic brethren, so far as we know them, will be brimming over with gratitude for this self-constituted championship. They may even possibly be like the M.D., "who did not thank him for it." Human nature is the same the world over, and the effect of a high degree of culture is not to manufacture braggarts.

It would really almost seem as if the possession of a general medical or surgical qualification were, in the eyes of the author, likely to exercise a deleterious influence upon the mind of the L.D.S. It reminds us of the now happily almost obsolete cry of "too much science, let us have the practical man," who oftentimes proved a blundering ignoramus, brimful of theories from which a little acquaintance with scientific methods would have emancipated him.

The more serious portion of the address deals with an old question; that of the relative advantages of association with the general body of the medical profession, or of organisation upon a distinct and independent basis, "Home Rule," as it is termed somewhat appropriately, for the parallel runs a good deal further than appears at first sight, since the feeling is forced upon the reader that

the desire for this form of autonomy is, in both cases, partly dictated by a dislike of a governing class, in our instance the medical corporations and the Medical Council.

We are not prepared to uphold the wisdom of the Medical Council in all respects, and, indeed, have devoted several articles lately to a criticism of their proceedings; but there would have been great difficulty in constituting any body from amongst the dentists of thirty years ago, which would have fulfilled the duties entrusted to it in a wise, impartial and satisfactory way.

It must not be forgotten that it was of enormous benefit in the early stage of dental reform that power was vested in such a body as the College of Surgeons, for it was above intrigue and could command the respect and confidence of all; whereas in the then state of the dental profession, with its small number of specially educated practitioners, it would have been quite impossible to have formed any executive body which would in an equal degree, or indeed in any degree, have compelled trust in its wisdom, consistency and entire good faith; there would very surely have been an amount of bickering and back-biting which we have been well spared.

At that time there was far from being any unity, or any mutual confidence, and the happier state of things which now obtains, and is exemplified in the existence of such bodies as the Association and its Branches, the Odontological Society and the Odonto-chirurgical Society, is in great part the outcome of those very measures which in the address are deprecated. The L.D.S. degree meanwhile apparently wins the writer's entire approval, if we are to judge by the way in which it is extolled as compared with medical degrees, and yet the whole theory upon which its curriculum is founded is based upon the close alliance between general medical knowledge and those particulars with which dental practice is mainly concerned.

ASSOCIATION INTELLIGENCE.

The Meeting of the Representative Board.

At a meeting held at 40, Leicester Square, on June 4th, the following gentlemen were present:—Vice-President, J. Smith Turner, Esq. (in the chair), Sir Edwin Saunders, Messrs. Storer Bennett, F. Canton, W. H. Coffin, S. J. Hutchinson, J. H. Mummary, G. W. Parkinson, C. S. Tomes, Felix Weiss, T. Charters White, and Morton Smale (hon. sec.) of London; Messrs. J. A. Biggs, J. R. Brownlie, and Rees Price, of Glasgow; Messrs. J. Humphreys, B. Neale, and C. Sims, of Birmingham; Messrs. J. T. Browne Mason, and H. B. Mason, of Exeter; Messrs. G. Cunningham and W. A. Rhodes, of Cambridge; Messrs. F. H. Balkwill, Plymouth; G. Brunton, Leeds; F. Bullin, Chester; J. Fenn Cole, Ipswich; J. Dennant, Brighton; R. F. H. King, Newark; T. E. King, York; R. Rogers, Cheltenham; S. Lee Rymer, Croydon; R. T. Stack, Dublin; and W. H. Waite, Liverpool.

The names of the following gentlemen were received as having been elected by the Southern Counties' Branch:—C. R. Amoores, L.D.S.I. (Dover); H. B. Gill, L.D.S.Eng. (Norwood); B. A. Williams, L.D.S.I. (Croydon.)

The Hon. Sec. announced that since the last Board meeting the names of the following gentlemen had been received as having been elected by the Midland Branch:—G. S. Campion, L.D.S.Eng. (Manchester); W. Matthews, L.D.S.Eng. (Liverpool); J. Royston, L.D.S.Eng. (Liverpool); W. Simms, L.D.S.I. (Manchester).

The following gentlemen were elected members of the Association, by ballot:—S. C. Buckland, L.D.S., M.R.C.S. (Canterbury); K. W. McAlpin, L.D.S. (London); Jas. Petherbridge, L.D.S.Eng. (Cheltenham.)

The TREASURER reported that the balance at the bank was £463 4s., and that 350 members were in arrears with their subscription.

A discussion arose as to the use of the prefix Dr. by dentists, but inasmuch as an article on the subject had been published in the JOURNAL quite recently, which was in harmony with the general line of the discussion, the Board did not feel called upon to express any authoritative opinion on the matter.

Mr. W. H. WAITE and Mr. BOWMAN MCLEOD, by letter, called the attention of the Board to the fact that a large number of deceased dentists still remain on the Dentists' Register, and handed in some certificates of deaths; the fault, as the President pointed out, was with the Registrars of births and deaths, and it was resolved to memorialise the Registrar-General on the subject. Mr. WAITE also called attention to the number of pharmacutists and chemists on the Dentists' Register, whose names on their decease had not been returned as dentists to the local registrar, and the business committee was requested to devise some method whereby the Officers of Branches, and the Members of the Association generally, might by combined action, have certificates of deceased persons on the Dentists' Register forwarded to the Hon. Secretary of the Association.

Mr. BROWNLIE stated that certain progress had been made with regard to the Annual Meeting in Glasgow. The rooms of the Faculty of Physicians and Surgeons had been secured for the meeting. He urged that the business might be concluded by Friday night, in order that Saturday might be devoted to the places of interest round Glasgow. The place in which to hold the annual meeting in 1888 was discussed, both Birmingham and Dublin being mentioned as suitable places, but the matter was left in abeyance until the next meeting of the Board.

Sir EDWIN SAUNDERS called the attention of the Board to the proposed enlargement of the Dental Hospital, which would provide much better accommodation for the Board meetings of the Association.

Several cases of infringement of the Act were considered and referred to the Business Committee.

Address delivered at the Annual Meeting of the
Midland Branch held at Chester.

On Friday, April 29th, 1887.

BY THE PRESIDENT,

MR. FRED. BULLIN, J.P., L.D.S., R.C.S.ENG.

*Members of the Midland Branch of the
British Dental Association.*

GENTLEMEN,—I thank you very much for the honour you have conferred upon me by unanimously electing me to the Presidential Chair.

In welcoming you to "Rare Old Chester," the City of my adoption, in which I have resided more than half my lifetime, you will pardon a citizen's pride in saying that we Cestrians welcome you to a city of high distinction—one that can boast of having been a civilized spot when London, York, Liverpool, and Manchester were unknown to either history or fame ;—a City that was once a fortress of the first rank, during the Roman occupation, and a place whose stone walls, for nearly four hundred years, resounded to the tramp of Roman soldiery. Ages ago, Roman Emperors have visited its Castrum, and walked its streets. Roman fashion and civilization held undisputed sway, while from it Roman Generals directed some of their most successful campaigns. On its deified river the Roman Navy has floated in security, and from it has sailed to assist in the subjugation of North Wales and North Britain. Its advantageous geographical position, as the key to North Wales and the Northern provinces, was early recognized by its Roman conquerors, and from it as a centre radiated six military roads, to the most important districts in Britain. So admirably chosen were these roads as to direction, that several of them continue to this day to be great lines of traffic, by rail or by road. Those of you who have travelled from Leeds to Manchester and Chester, will, for greater part of the distance, have followed the route of the Roman street between Chester and York.

To further trace the history and fortunes of our Roman Deva, under its successive occupations by Saxons, Danes, and Normans, would be beside my present purpose : all have left, in various ways, traces of their presence.

A portion of our Archæological treasures has been temporarily placed in the Art Gallery of the Grosvenor Museum, which is open to your inspection.

Turning now to matters professional, I feel sure that those present, who, like myself, have been for many years engaged upon the battle-field of professional life, will pardon me, if I address myself to-day chiefly to the younger members of our profession. To those who have somewhat recently taken the L.D.S. degree, *cum curriculo*, of one of the Colleges of Surgeons of the United Kingdom, and probably to many who do not come under that category, but who are nevertheless legally registered dentists, a sketch of mechanical and operative dentistry practised forty years ago, as compared with the methods adopted at the present day, may not prove uninteresting.

I do not intend to carry you, in imagination, back to the date when general surgery and crude systems of mechanical and operative dentistry were practised by members of the tonsorial art; to the year 1163, when the monks and barbers had to dissolve partnership, in consequence of the Council of Tours prohibiting the monks from performing any operation that caused the shedding of blood; or to the reigns of Edward IV. and Henry II. (eventful eras in the history of Dentistry and Surgery); or to the reign of Henry VIII., when by Act of Parliament a partnership was confirmed between two companies of Surgeons, and, as the Act sets forth, "there were two several and distinct companies" (trades unions) "of Surgeons, occupying and exercising the Faculty of Surgeons, one called the Barber Surgeons of London, and the other the Surgeons of London," when it was thereby enacted "that the two several and distinct companies should from henceforth be united and become one entire Body Corporate," &c., &c.; but to the eventful, restless, and not always friendly history of the Surgeon and Dental Surgeon, up to the granting of a Dental Charter to the College of Surgeons of England, in September 1859, and the Dentists' Act of 1878.

In passing, I may say tradition credits our barber ancestors with having been sufficiently ingenious to file pieces of bone and fix them in position with silk ligatures, to fill up the gaps that were then seldom to be found in the mouths of their patrons, and relate to you from memory, as many others still living could more eloquently do, the plans adopted in the two departments of dentistry, from thirty to forty years ago.

It will be, in a few days, thirty years since I came to this City, to practise the profession of my choice. Over twenty-five years of that period, I had the honour of being Hon. Dental Surgeon to our Hospital, the Chester General Infirmary; and on retiring from active service in January last, in accordance with the bye-laws, I assumed the position of Consulting Dental Surgeon to that Institution.

Three decades must, of necessity, form the most active and eventful part of a man's professional career, and only those of us who have been so long thus engaged, can, by looking back, be competent judges of the amount of progress made, scientifically and socially, during those years. No young practitioner can possibly appreciate the feelings of amazement that fill our minds, when we compare the principles and practice of dentistry of

to-day, with those of thirty or forty years ago. Then, as now, the education of the competent dentist commenced with acquiring a practical knowledge of Dental Mechanics in the workroom, and his not very frequent visits to his instructor's operating room. The source from which he gained general dental knowledge was limited to the stock his instructor possessed: and so narrow-minded were the dentists of those days, that not even a personal friend would presume to ask permission of a professional brother to enter his workroom. If such a request had been made, it would have been refused, lest he should "pick up" some mechanical idea before unknown to him. Consequently the knowledge of Dental Mechanics progressed slowly, each practitioner thinking himself the possessor of more wisdom than his neighbour, and selfishly reserving what he did know for his own pecuniary advantage.

The work of the dental mechanic was then more laborious, but cleaner, and more fascinating than now; for the use of vulcanized rubber, as a base for artificial teeth, had not been even thought of. The ivory of the Hippopotamus (*sea-horse*), of the Walrus (*sea-cow*), and, to a much smaller extent, of the Whale, was used in the construction of artificial teeth themselves, or as a base in which natural teeth were mounted.

Many of us can remember the names of the famous "bone-workers" of London, who supplied not only the Dental Surgeons of London, but the provincial practitioners, with their artistic productions.

In watching the working of this beautiful handicraft, many of us became attracted by it, and aspired to their standard of excellence. I look back myself, with pride and pleasure, to the time when I burned the midnight oil, working on the unyielding block of ivory, striving to attain to similar artistic results.

"It would appear," says a high authority, "from all we can gather, that bone was the only material used in the construction of artificial teeth, until nearly the close of the last century." This would indicate the date when gold, silver, platinum, and palladium (especially the latter) were introduced as materials to mount natural, and subsequently, mineral teeth upon, chiefly for upper sets, bone still being almost exclusively used for lower dentures up to thirty or forty years ago. The exact date when mineral teeth were introduced must remain uncertain; but we are old enough to remember when it was with great difficulty

elderly patients, especially ladies, were induced to wear "false teeth," much preferring to wear the natural teeth, frequently stolen from the battle-field and the hospital, and largely imported from France; for the mineral teeth then made were most unnatural in form and appearance, and would not grow darker with years, however much port wine they came into contact with. Gradually, however, the gold and platina-tubed teeth mineral of this country, and the flat teeth of France and America, were destined to supplant the use of natural teeth for dentures.

I have before me a specimen of mineral tooth-work made in Naples about the year 1830; also several specimens of bone-work, which may prove interesting to many of the younger members present. In those days zinc had not been used for models, but the aid of the brass-founder had to be brought into requisition. Afterwards came the fusible metal, and subsequently as now, zinc.

So scanty was the supply of tools in the work-rooms, that the mechanic, with knowledge gained by visits to the smithy and the cutler's workshop, made a large number of the tools used in the work-room, and not a few instruments used in the operating room. The few dental depôts, then in existence, had not the stock of tools they now have for selection, and necessity became the mother of invention. To illustrate this, I may tell you that the late eminent Mr. Behrend, of Liverpool, who practised so many years in that city, assured me thirty years ago, that he had never yet purchased a forceps, or any other instrument, but he found it necessary to place it in the forge and remake it to a design of his own. The proprietors of respectable depôts did not send agents to our houses. When they commenced to send them into the provinces, we received invitations to meet them in some commercial hotel in our city, where their goods were displayed, from which we could select, according to our requirements.

I need not say that a great change has come over this scene. From a multiplicity of depôts, we, in the provincial towns, receive, sometimes, too much attention from these useful and polite visitors.

Time would not permit me to enter more fully into the former crude appliances of the workroom. The demand for artificial teeth was then comparatively small. They were chiefly the well-to-do patients who indulged in the luxury of sets of teeth.

Medical men were not generally convinced by observation of the importance of such mechanical aids for their dyspeptic patients. The majority of those who sought such aid were influenced by feelings of vanity. Since then what a change ! The demand for artificial teeth has increased enormously, from a variety of causes. Amongst others may be mentioned the sadly too free use of the forceps. This, long ago, was the misfortune, rather than the fault, of the dentist : for science had not yet taught us conservative dentistry. The improvement in the form and variety of tints of artificial teeth is due to the progress of art ; the improvement in methods of adapting them, to the restless energies of English and Americans upon the broad field of Dental Mechanics.

About twenty-eight years since I well remember reading in an American Dental Journal, with an incredulous smile, that a Dr. So-and-so had been experimenting with a mixture of India-rubber and some pigment, which, when vulcanized, formed a good base for artificial teeth, and that he had exhibited specimens at a meeting of dentists. The idea then seemed preposterous ; and after it had been introduced into this country, an old dental relative said to me, "It is only twelfth-night cake work : it will only be a nine days' wonder." What a mistaken prophecy ! For how largely and usefully that material has been used ! Through its requiring less time in constructing dentures, and not necessitating such arduous and skilled labour as other materials, it has brought artificial teeth within the means of middle and lower classes, much to their physical advantage.

Many still living will remember the pains and penalties with which we used to be threatened for infringing Goodyear's patent by using vulcanized rubber for dental purposes. This is now a matter of history ; but the introduction of that material caused quite a revolution in Dental Mechanics, deprived them of much of their charm for us bone-workers, and, I need not say, did not raise the standard of the workroom assistant.

I have no better means than you of ascertaining the probable number of artificial teeth manufactured in this country annually, but we know that the total must be enormous, not only here, but in the United States of America. I have it on the authority of my friend, Mr. H. M. Lewis, who has been for many years managing director of the great S. S. White Dental Firm of Philadelphia, that between twelve and thirteen millions of artificial teeth are annually manufactured in that country alone ; not, of course, to

be used in that country only ; for in the spring of every year, my friend, Mr. Jules M. Ravel, the foreign agent of the S. S. White family, crosses the Atlantic in one of the swiftest steamers, with quite a cargo of the well-known artificial teeth, and the matchless instruments of that world-famed house, *en route* for the dental depôts of London, Paris, Vienna, Dresden, Berlin, and Moscow.

I cannot forbear from expressing my surprise that the younger members of our profession are so little aware how much we are indebted to our American cousins for many of the inventions which have become common property, and are claimed as solely the result of English genius. Some instructors do not inform their pupils of this indebtedness, from, I fear, feelings of British pride (happily now fast dying out)—

Firstly—Because we were, as a nation, deservedly beaten at Ycrktown.

Secondly—Because occasionally we meet with a Yankee who tells us that the States have grown so big, that he guesses they are destined to “wop all creation”—the exact counterpart of many a swaggering young Englishman, frequenting the palatial hotels of New York and elsewhere, who, by his insulting gestures and remarks, attracts notice, and is (mis)taken as the type of an English gentleman.

Thirdly—Because, once upon a time, there lived in the States a fraudulent man, who supplied to fraudulent charlatans in this country and elsewhere, bogus medical and dental diplomas of colleges that never existed, until he at length fell into the hands of the law.

Perhaps these are amongst the reasons why there is so much reticence in our dental schools as to the real source of the useful inventions referred to.

As in the future our intercourse with our American brethren will be greater than in the past, it cannot be too generally known that the American gentleman and the Yankee are two very different personages, and that the latter is as much despised by the former as by us. The late Dean Howson once remarked to me that “The educated American is not a braggart.” It is my privilege to count among my most esteemed friends citizens of Philadelphia and Chicago, and I can truly say that their feelings towards us as a nation, and those of my dental friends towards us as a profession, are reciprocal and most sincere.

Passing now from dental mechanics to operative dentistry, as

practised from thirty to forty years ago, I can endorse all that was so well said last year at Bradford, by our friend Mr. Matthews. The means of obtaining a theoretical and practical knowledge of operative dentistry was very limited. To supplement the practical instructions of our teacher, we were thrown upon the works of Fox, Nasmyth, Bell, Chapin Harris, and others, for theoretical information. I need not tell you how the profession welcomed the published lectures of John Tomes, in 1848, which shed such a flood of light upon dental surgery, and has grown into the present invaluable manual, the joint labours of a worthy sire and equally worthy son.

Only the elder members of our profession can remember the close application necessary (in the absence of dental schools) to become a correct diagnostician, and a skilful operator. In some dental families, whose honoured names are familiar to us, their methods of practice were practically family secrets—a kind of family property, unconsciously held by them; and to this may be attributed their success in practice. In saying this I cast no reflection upon honoured names—far from it; for when dental schools were instituted their rich stores of knowledge were freely poured out, for the advantage of the student, and for the cause of suffering humanity.

Up to 1840 the German Key was chiefly used for the extraction of teeth. Of course, there were crude-shaped and clumsy kinds of forceps, resembling gas-fitters' pincers, for the removal of single-fanged teeth, which may now be exhibited as curiosities. The greatest honour is due to Sir John Tomes for his invaluable invention of the modern tooth-shaped forceps. It is impossible to estimate the amount of human suffering that has been prevented by that priceless invention—the result of years of thought and application, and so generously given to the profession and to the world.

The methods then adopted for treating exposed pulps were very uncertain, and even cruel. The actual cautery was not unfrequently used; and even when zinc chloride and arsenic were used, for want of proper appliances, the removal of the pulp, from some teeth, was not even attempted. I have sometimes thought that the number of successes under the use of arsenic arose from our unconsciously adopting Colman's method in anticipation.

Until about fifteen years since the Burring engine had not been invented (since then so much improved), with its number-

less drills and appliances, but now how could we "open up" a molar for treatment without it? The same may be said of the rubber dam, the saliva ejector, the hand mallet and the electric mallet. How could we build up hard gold contour fillings without these aids? The Wilkinson operating-chair of to-day, so invaluable to the specialist in tooth-filling, is as far ahead of those in use forty years ago as the modern "locomotive" is of the old stage coach. There was, therefore, every excuse for the very frequent use of the forceps in those days. But nature, always beneficent, seemed to rebel against this course of procedure, and called in the aid of science to do battle on behalf of conservative dentistry. Consequently, in many a practice, where twenty teeth were extracted at that date, probably only two now fall victims to the forceps.

During the last quarter of a century conservative and reparative dentistry have made such advances, that with the multiplication of dental dispensaries in all the large towns in the United Kingdom, the labours of the mechanical dentist will be very materially interfered with; for the demand for artificial teeth will assuredly decrease in the middle classes, as it has for some years past in the upper classes of society.

Again, with the modern appliances in our hands, we have, I think, become more humane as operators, and we may congratulate ourselves upon not being so much dreaded by the public as formerly. The Abernethy habit of brusqueness of manner with the terrified patient, both in dentistry and surgery, has, or ought to have, entirely passed away. An age of dental civilization has set in. The rough, and consequently inhumane, operator of the past generation is no more, and, as a matter both of principle and of policy, students are taught to act (as gentlemen) as gently with the peasant as with the peer.

The introduction of anæsthetics forms an important era in dentistry. An eminent dentist, in his excellent little work on "Anæsthetics," wisely remarks—

"In the case of dental operations, the issues involved are, comparatively speaking, small, yet there may exist conditions, in which the acute agony of the extraction of a tooth is sufficient to cause absolute danger to the nervous system. . . . It is with a sense of proper pride that a dental surgeon considers the question of anæsthetics, seeing that but {for the experimental genius of Dr. Wells and Dr. Marton, American dentists, we might

still be in the dark upon this important subject. . . . Priestley discovered nitrous oxide, towards the close of the eighteenth century, and Sir Humphry Davy observed that it possessed anæsthetic properties, about 1800; but his suggestion, that it might be valuable in surgical operations, does not seem to have been acted upon at that time. In the year 1844, Dr. Horace Wells, a Connecticut dentist, observed this property of nitrous oxide, and moreover reduced it to practice, by administering it in his own practice; but the results in those early days, with an imperfect apparatus, were not altogether satisfactory. Then Dr. Marton, a former partner of Dr. Wells, but who had, strangely enough, received no hint or suggestion from him, instituted a series of experiments, quite independently of his old associate, principally upon the lower animals, which resulted in the discovery of sulphuric ether. Much discomfort being experienced from the pungency of this agent, chloric ether was employed instead; and from this Mr. Waldie, of Liverpool, separated chloroform, which was first administered by Sir James Simpson, in the autumn of 1847. (For a time chloroform came to the front, and then ether alternately until 1868.)

“While the rival merits of ether and chloroform were being fought out by their several champions, protoxide of nitrogen, which had pioneered the whole question of artificial anæsthesia, was disused and forgotten. It is impossible to say who really first rescued it from the obscurity into which it had fallen; probably Dr. Q. D. Colton is entitled to that honour, in America; but as far as England is concerned, we owe our knowledge of nitrous oxide a second time to an American dentist. Dr. T. W. Evans, of Paris, having recently brought over the nitrous oxide gas to this country, exhibited its anæsthetic properties at the Dental Hospital of London, and moreover assisted, in every way, to carry out further experiments on this subject. . . . For this inestimable addition to our scientific possessions, we owe our transatlantic brethren a debt that can scarcely be over-estimated.”

The use of cocaine is increasing amongst dentists, but so far it seems to be valued more by ophthalmic surgeons.

I have endeavoured very superficially to sketch a contrast, from memory, of dentistry, both mechanical and operative, over three decades, with the advanced methods of the present time. But I have said nothing of the professional and social status of our profession during that period.

I now intend briefly, but plainly, to refer to that subject ; and in doing so I am aware that I shall incur the censure of some worthy members of our profession, whom I would not willingly annoy. But I feel that I should not allow this opportunity to pass without stating my pent-up conviction of many years, and I am comforted by the thought that I shall be expressing not only my own views upon the subject, but those of by far the larger portion of those who hold the L.D.S. degree of England, Ireland, and Scotland, as well as of Harvard and Michigan.

In the year 1855-6, there was a wide-spread desire among the dentists of this country, to form an association, for the purpose of founding a National School for the education of dentists, and for obtaining, by Act of Parliament, powers to institute a Board of Examiners, authorized to grant diplomas of fitness and ability to practise dentistry. As the result of this outburst of a very legitimate feeling, over three hundred enrolled themselves, during the first year, as members or associates of what was prematurely called "The College of Dentists." We well remember how hopefully and laboriously many good men and true worked, with these objects in view, viz., their formal recognition as a distinct and legalized profession, and the future education of dentists. I am in possession of "The Transactions" of that body, and a list of the members who at the time joined ; and when recently scanning, in that list, the names of many still living, and those of equally good men who have since passed away, I could not help feeling that that list would compare favourably with any Medical or Surgical Society in existence. You may imagine how deeply pained the pioneers of that movement were, when, at meeting after meeting, letters of resignation were received from men of position in London, to whom the profession looked for assistance and guidance. The reason was soon discovered ; the remembrance of it returns as I read in the "Transactions" as follows :—

"A letter was read from Mr. ——— F.R.C.S., declining to take part in the affairs of the evening ; and it must be here stated, that the offer of presiding had been made to that gentleman, which had also been declined. Towards the latter part of the meeting, a statement was made by a gentleman present, that certain practitioners had taken up the idea of professional reform ; and to this end had memorialized the Council of the Royal College of Surgeons, praying for a special examination in dental surgery, as in midwifery. This announcement caused a degree of

surprise, on account of the *privacy* of the act, and its consequent reflection upon the profession generally. The hitherto uncared-for members of this branch of surgery awoke to the astonishing reality, that a small number of their body had gratuitously and secretly become the foster-parents of the rest, and had actually taken steps in the direction of tutoring them, as to the *only* means of becoming recognised and qualified practitioners in dentistry."

Humbly and persistently did those few (nearly all possessing the surgeon's degree) stand knocking at the door of Lincoln's Inn, engaged in the task of pleading for admission on any terms, on behalf of themselves and their country cousins, the majority of whom were not dressed in M.R.C.S. uniform. But their prayer was refused for what did the Council of the Surgeons' College know of dentistry? Like persistent mendicants, although left out in the cold, they knocked again and again, and earnestly prayed for admission; and even promised the Council to assist them with their dental knowledge at the examining board, if only they would take them and their poor relations in.

At last the prayer of the eighteen pilgrims was heard and granted, and the fate of the College of Dentists was sealed. The Non-dental College applied for and obtained a dental charter, granted on the 8th September, 1859, which gave them power, by the aid of dentists, to institute examinations in dentistry, and with this our hopes of a Dental Act and Dental College, formed to meet the necessities of the age, were crushed.

From 1859 to 1863 the minority of us applied for permission to be examined, *sine curriculo*, by this novel tribunal. We stood the test of the examination, and, after handing over our gold to the coffers of the College, received certificates of fitness to practise dentistry. I fear the future dental historian will consider us a set of idiots, for having paid a large fee, simply to be informed (for our own and our patients' satisfaction) of what we knew before, that we were competent to practise dentistry. The idea of our profession being recognised by a royal charter had been dangled before the eyes of the College of Dentists. In time many favoured the plan, and meetings of the Odontological Society and the College were held, all naturally supposing that the terms would be liberal; instead of which a charter was obtained, conferring power to institute dental examinations, and to grant certificates; but not one word in the direction of making the recipients of them legalized practitioners, or granting them a

single advantage enjoyed by the members of the College of Surgeons.

I have no hesitation in placing on record, as an opinion based on twenty-six years' observation, that the union with the College of Surgeons (so far as it can be called a union) was one of the greatest mistakes ever perpetrated by a body of well-meaning men—men, who, because the majority of them happened to possess the M.R.C.S. degree, longed for the maternal leading-strings, and led their provincial brethren into a dilemma, from which you, the future generation of dentists, will have to extricate yourselves.

I think I hear some worthy M.R.C.S. ask for proof of this assertion. I reply—

Firstly—The alliance was formed without the consent of the majority of the dentists of the United Kingdom then in practice, as the wishes of the profession were not consulted.

Secondly—It was formed against the wishes of the great body of the medical profession; and, therefore, can you wonder that the friction, then commenced, has continued to increase? and that we have never been recognized as more than tooth-extractors by the majority of the members of the medical profession.

Thirdly—Because the dental charter did not confer upon us any of the advantages which the members of the College enjoyed, nor did it give us a legal status as a profession; for, although we stood the test of examination, and so many of our names were placed on the roll of the College of Surgeons from 1859, it was not until, and by, the Dentists Act of 1878, that we were a legally constituted profession—a kind of dental raft, saved from the wreck of the proposed Medical Act Amendment Bill of that date, that was submerged for the time by disputes in the medical profession, and therefore did not become law until 1886.

In proof of this, I will quote the words of the worthy President of the Students' Society of the Dental Hospital of London, as used at their meeting on February 14, 1887. Referring to the importance of every L.D.S. having his name placed upon the Dentists' Register, he said—

“In the first place, there was no such profession as that of Dental Surgery, until registration was established. It was purely by registration by the State that dentistry became a profession registered by law.”

And then bear in mind, that by that Act a host of druggists' assistants and charlatans claimed the same legal privileges as we, who had taken the L.D.S. degree after 1859, and had practised dentistry solely. The only consolation is that over two hundred of these illegitimate dental names have disappeared from the register, and the number will annually decrease.

Fourthly—Because the M.R.C.S. never was, and never will be, a dental degree, any more than the L.D.S. constitutes a general surgeon's degree. In saying this I cast no reflection upon those of our brethren who, by dint of industry, and by residence in the metropolis and other large towns, have had opportunities, and have found it convenient to take the M.R.C.S. in addition to the L.D.S. degree. But we cannot admit that this combination makes the M.R.C.S. a kind of higher dental degree. Suppose, for instance, you take nineteen out of twenty possessors of the M.R.C.S. or F.R.C.S. degrees into the operating room of one who has kept pace with the advancement of dental science, and consequently is in possession of the numberless appliances unknown to the profession thirty years ago, and ask him the names and uses of those instruments. Would he recognize one out of fifty of them? No! And why? Because he is only a surgeon.

Again, when an M.R.C.S. sends you a patient, say with a molar whose pulp is diseased, and its fangs embedded in an alveolar abscess, for the purpose of having it extracted; suppose you, with the patient's consent, reduce the abscess, remove the diseased pulp, treat the cavity, and fill the tooth, who is so much surprised, if not annoyed, as the M.R.C.S. who sent him? If you ask him what treatment he would have adopted to produce like results, can he tell you? No! And why? why? Because he is only a surgeon.

Again, an M.R.C.S. extracts a tooth, and excessive hæmorrhage follows. He uses various styptics and plugs the socket, but without avail. The fainting condition of the patient threatens serious consequences, and in not unreasonable alarm he sends to you for dental aid. You hastily construct a denture, and fix it firmly in position. Soon the blood ceases to flow, and the surgeon's anxiety ceases with it. But the M.R.C.S. is an authorized practitioner of the healing art; then why did he, in his alarm, send for you? Why? Because he is only a Surgeon.

Again, let us suppose a carriage accident has occurred; a

wheel has passed over the patient's maxillæ ; the superior one is crushed, and the inferior divided into two or more parts. The M.R.C.S. sends for you, and having placed the shattered bones *in situ*, you design and hastily construct metallic or vulcanite dentures, which, when applied and fixed, hold the shattered parts in their normal position. Meanwhile ossification gradually goes on, and a cure is effected. Why did the M.R.C.S. in his helplessness send for you? Why? Because he is only a surgeon.

This is only the fringe of the subject. I will not weary you with more cases. But how can the M.R.C.S. be a dental degree? The separation of the dental from the control of the medical profession would, I think, be very popular, and equally so to both. The Medical Council are no more competent to deal with the future of the dental profession than the Commander-in-Chief of the British Army would be to act as Admiral of the Fleet. If we may judge from reports, the Council would be pleased to be relieved of what has proved an arduous task. Twenty-two years after the Medical Council had obtained the dental charter, and the College of Surgeons, with the aid of dentists, had framed and enforced the curriculum, they had a long debate as to what class of the animal kingdom a dentist belonged, and what his habits, &c., were. The united wisdom of that collective body could get no further than that he was a "tooth-extractor," but of a superior species of tooth-extractor if he had taken the M.R.C.S.

At several of their meetings there were very warm and lengthened discussions on the advisability of attaching other degrees than dental to the names of the registered. One would have thought that common sense would have led them to decide that the L.D.S. of the Colleges of England, Scotland, and Ireland, with those of Harvard and Michigan, which they had selected for registration, would have been the only ones admissible to the Dentists' Register. Some of the members, however, proposed the addition of medical degrees, while others were afraid of disgracing those degrees by so doing. One member thought that "the introduction into the Dentists' Register of the sixty-two different titles which were recognised by the Medical Act would at least be inconvenient." One member asked another if he was aware that "a surgeon" (without being a dentist) "could practise as a dentist without registration," and the reply was, "I was not aware of it." Another member said—"The Council had to determine what was really a higher qualification in dentistry, and that the question re-

solved itself into this: Is the membership of the College of Surgeons a higher qualification in dentistry? He should be somewhat influenced by the views which surgeons took upon the matter!" Observe what view the surgeons did take—not the dental surgeons, who alone were capable of forming an opinion. One beam of light gleamed across the mental fog of that august chamber, when a worthy M.D. rose and said: "There seems to be an idea in the minds of all present that dentistry consists in pulling out teeth, and one man has got on the Register because he has pulled out thirteen thousand teeth; but I would remark that dentistry is not pulling teeth out, but keeping them in."

At another meeting we again find the surgeons and physicians, in council assembled, still in a fog over dental affairs. One member advocated both medical and dental degrees being placed upon the Dentists' Register, to distinguish one dentist from another. "I think," he said, "it is very desirable, if barbers and sham apothecaries have got on the Register, that good men should be allowed to put their higher qualifications on the list." To this another member replied, "I have a word to say about the dentists, and I earnestly hope that this will be the last time that 'the dentists' question will be brought before us. We have had more trouble in the last two or three years with the dentists than we had during the whole preceding twenty years during which I have been a member of the Council. Twice we have been summoned here to meet specially about it. Four times already we have altered the Register, and this will be the fifth change we have made. From first to last the Dentists Act has been the source of infinite trouble, and I believe it is likely to do very little good for either the dentists or the public."

Again, a member of the Council, tired of the quixotic conflicts over matters they did not understand, in very weariness of spirit said: "I assure you I see with the greatest pain that gentleman opposite" (Mr. T——) "hanging day after day on the skirts of the Council. He ought to be sitting here, or at the head of a board of dentists. The dentists have, from sheer want of proper guidance, made themselves a fragment, instead of an independent body. They come and pay their money here, which we spend for them, and they have not a single voice in anything that we do affecting them. I am ashamed of it, and I regret it deeply. They ought never to have submitted to such an Act," &c., &c.

The words I have just read are not mine, but those of an

enlightened member of the Medical Council ; and truer words were never uttered. Prior to September, 1859, "the dentists, from sheer want of proper guidance, made themselves a fragment, instead of an independent body."

This opinion is shared by the great body of both the medical and dental professions. The former has shown in the lecture room of the hospital, at the clinical lectures, that the "dentals" have been treated as interlopers. The stigma clings to the hard-working dental student, when, after five years' anxious study, he has passed victoriously from the portals of Lincoln's Inn, and he is treated through life as only a tooth extractor. The following case will illustrate the treatment the L.D.S. often experiences from some medical men :—

I knew an L.D.S. who was conveyed by an M.D. in his carriage to the house of a lady patient. They waited awhile down stairs until she had risen from her bed, and enveloped herself in a morning wrapper. The M.D. had been treating her for weeks for facial neuralgia, until she was exhausted from loss of sleep, and had to keep to her bed. On examining her mouth the L.D.S. pointed out at once the cause of all the needless suffering. They placed the patient in a chair, and the M.D. proceeded to administer chloroform in a very careless manner. The L.D.S., who stood by with forceps in hand, observed a cessation of breathing, and drew the attention of the M.D. to the startling fact. The handkerchief was dashed to the floor, and the M.D. exclaimed, "She's gone !" He had "lost his head." The L.D.S. earnestly said, "Take that arm," taking the other himself, and in an instant she was upon the floor. The L.D.S. knelt over the apparently lifeless body, and vigorously produced artificial respiration, and the patient breathed again, with the sound well known to those who have been present on such anxious occasions. That patient's life was saved by the L.D.S., but the M.D. did not thank him for it, nor did he ever cease to speak disparagingly of the L.D.S. degree.

In the provinces the L.D.S. is often called to the bedside of a patient by the M.R.C.S., to administer the nitrous oxide gas, when a short operation has to be performed, and it is considered unsafe to use chloroform or ether.

I was much amused, some few years since, while having the honour of sitting at the table of a friend, next to an L.D.S., M.R.C.S., of the mature age of 24. I listened attentively to a

description of his extended knowledge of the administration of anæsthetics, and of the nitrous oxide gas in particular, and of the hair-breadth escapes he had witnessed, when the patient had been suffering from some cardiac affection.

I ventured, of course with great humility, to take exception to his opinion of "the great risk incurred," if only it were cautiously administered, even in the use of chloroform or ether, maintaining that there was practically no risk in the use of nitrous oxide gas, when thoroughly administered.

He then asked if I had ventured to administer it without an M.R.C.S. being present. I replied, "Thousands of times," and cited the following case, which had occurred a few days previously:—"A noble lord drove to my house, in company with his son, aged about 23, who was suffering from an affection of the heart, and had to be carried by two men from the carriage to the operating chair. His father informed me of his condition, and asked me if I considered it safe to administer the nitrous oxide gas. To satisfy him I used the stethoscope, and assured him that I should have no hesitation in administering it. The anæsthetic was thoroughly administered, and I removed an upper molar, of course painlessly." My young friend was amazed at my indiscretion, and commenced to give me a little friendly advice for my guidance in the future; but to save him the trouble, I said, "My dear sir, I administered chloroform to that noble lord himself, about two years before you entered upon your present state of existence."

This statement saved him the trouble of exhibiting to my mental view, visions of coroners' inquests, the prison cell, and the gallows.

I have heard two reasons assigned for such treatment, and they constitute a strong argument in favour of our becoming a distinct body.

Firstly—Because the annoyance felt by the medical profession, at the time we became "a fragment" grafted into that body in 1859, has not died out, but is inherited by the younger members.

Secondly—Because it is a fact that we have upon the Dentists' Register a certain number of barber dentists. This fact we deplore, but do not deny. But they are not so many in number as they were upon the first Medical Register. We may also remind the members of the Medical Council, that to-day there are hordes of barber surgeons and barber physicians in this

country, holding college degrees, with their names upon the Medical Register, who are selling toilet requisites over the counters of dirty shops, or disgracing their profession by practising as specialists for the cure of nervous debility and other unmentionable ailments; issuing pamphlets to entrap the unwary, and extorting money from those, who, they know, dare not expose their misdoings, lest they themselves should be exposed to their friends, as the victims of a vicious life. No doubt the M.R.C.S. or M.D. will say, such an one is "*un mauvais sujet*." Granted; but no worse in the dental than in the medical world; and "they who live in glass houses should not throw stones."

Need I say that our very presence here to day, as a separate association, as distinct from the Medical Association, adds force to my contention, that we are, and ever shall be, a separate profession. Why then should we not be a representative body, with our own Council, and our own board of examiners, and stand in a position to obtain Dental Acts of Parliament, and be entrusted with the management of our own affairs? The surgical degree has been the bane of our profession, and I am weary of hearing some of our esteemed brethren urge dental students to go in for the M.R.C.S. degree. The sound has been ringing in our ears for years, and with this result, that nineteen out of twenty have not done so since 1859, and will not do so, for the simple reason that they select the dental in preference to the medical profession. They even consider that the L.D.S. degree, which takes a provincial man five years to gain, and costs him more money, is a higher one than the M.R.C.S., which can be obtained by only four years' application, and with a less expenditure of money. If the advice so kindly given be only moderately adopted, you perpetuate the evils of the past—two classes of dentists are created, one feeling itself supremely superior to the other. A student is asked to spend extra time and money in gaining a degree, which when obtained, professional etiquette forbids him to carry into practice, under pain of being ostracised by other members of the "charmed circle."

I am not alone in the belief, that many of our brethren in large towns have a craze for the multiplication of degrees. A wag has said that in cases of men of short stature, a degree adds an inch or two to their physical as well as to their mental stature. It certainly prevents them from seeing clearly through the L.D.S. spectacles.

At the risk of being charged with levity, I would illustrate my meaning by recalling a burlesque to the memory of those who have spent a few hours in enjoying the mirth-giving Japanese comic opera of "The Mikado." You will remember a certain important personage—"Pooh Bah" who traced his ancestry back to the protasmal atomic globule, and considered it to be his degrading duty to act as First Lord of the Treasury, Lord Chancellor, Lord Chief Justice, Commander-in-Chief, Lord High Admiral, Master of the Buckhounds, Archbishop of Tepatu, and Lord Mayor, both active and elect, "all rolled into one." When Ko Ko was about to marry Yum Yum, he consulted Pooh Bah as to the amount he would advise him to expend on the marriage festivities, requesting the favour of his advice.

"'Certainly,' was Pooh Bah's reply. 'In which of my capacities? As First Lord of the Treasury, Lord Chamberlain, Attorney General, Chancellor of the Exchequer, Privy Purse, or Privy Seal?'

"*Ko Ko.*—'Suppose we say as Private Secretary.'

"*Pooh Bah.*—'Speaking as your Private Secretary, I should say, "As the city will have to pay for it, don't stint yourself: do it well!"'

"*Ko Ko.*—'Certainly, as the city will have to pay for it. That is your advice?'

"*Pooh Bah.*—'As Private Secretary. Of course you will understand that as Chancellor of the Exchequer I am bound to see that due economy is observed.'

"*Ko Ko.*—'But you said just now, "Don't stint yourself: do it well."'

"*Pooh Bah.*—'As Private Secretary.'

"*Ko Ko.*—'And now you say that due economy must be observed.'

"*Pooh Bah.*—'As Chancellor of the Exchequer.'"

And so follows a succession of plights into which poor Pooh Bah finds himself drawn, by undertaking so many offices "all rolled into one."

Now observe the parallelism in the following parody:—

"*L.D.S. to M.R.C.S.*—'As a premium of 150 guineas was paid by my sire, in addition to my three years' unpaid services to a dentist recognized by the College of Surgeons, to enable me to comply with the first part of the dental curriculum, and afterwards fees to both the Middlesex and Dental Hospitals, between which

I worked hard for two years, and, as the result, gained the L.D.S. degree ; would you not advise me at once to set to work and reap the financial fruits of my labours ? ’

“*L.D.S., M.R.C.S.*—‘ Certainly ! You command my respect. You have failed in nothing, or you would have been “ploughed.” You have deservedly gained the highest dental degree in Europe. Go with my best wishes, place your name on the Dentists Register ; practise your profession in the interests of suffering humanity, and, by industry and thrift, lay aside part of your income for old age.’

“*L.D.S.*—‘ Certainly ! Your advice is both wise and kind. I will follow it, to the delight of my people at home.’

“*L.D.S., M.R.C.S.*—‘ But, of course, you will understand that if you wish to become a professional man, as distinguished from trade, and to be one of the elect, and see your name upon the Medical rather than the Dentists’ Register, then I strongly advise you to go in for the M.R.C.S.’

“*L.D.S.*—‘ But you said just now that I possess the highest dental degree in Europe, and you advised me at once to practise my profession.’

“*L.D.S., M.R.C.S.*—‘ As an L.D.S.’

“*L.D.S.*—‘ And now you say, “Go in for the M.R.C.S.” ’

“*L.D.S., M.R.C.S.*—‘ As a Surgeon—one of the “charmed circle”—I do advise you to go in for the M.R.C.S. Those initials are so respectable, although useless in dentistry ! But you know many useless things in this world are ornamental. And, above all, you may escape from seeing your name on that plebeian roll, the Dentists’ Register, and may even be elevated to the membership of that mysteriously fastidious fraternity, the “Association of Surgeons practising Dentistry.” Follow my advice, and your position will be much more dignified, although, I am bound to say, not more useful.’ ”

Seriously I believe this, in some degree, shows the difficulty many of our esteemed brethren labour under in dealing with the present and future of our profession. It was the cause of the mistake made prior to 1859, and it will cause you some trouble in securing independent dental legislation in the future.

In the remarks I have earnestly made, from the deepest feelings of conviction, I wish to place on record, that there are amongst us to-day many honourable exceptions to the rule—men with the L.D.S. and M.R.C.S. degrees, whose hearts are devoted to the

present and future welfare of our profession, and who have no sympathy with the fantastic gentlemen I have described.

Throughout, I have studiously avoided the use of names, for I have no desire to hold up to ridicule, or to pain any individual member of our profession. There ever will be, in every profession, men who occupy the "Boxes" and "Dress Circle," and look with disdain upon their brethren whom they place in the "Pit" and "Gallery." Such usually strive to lead; but they are the enemies of any useful reforms. I have endeavoured to point out the great mistake of 1859. But while doing so, I give those who made it full credit for the best intentions, their mental vision being clouded.

Some, whose features are still in our memories, are gone to their rest. The minority only of them remain; and even they, or certainly their sons, whom we all esteem, as bearers of honoured names, will in due time help you in your legitimate and forward movement in dental reform.

This is not the place or occasion for introducing politics. I may be excused, however, for saying that, as a loyal subject to the British throne, I am not in favour of what is popularly known as "Home Rule." But I think I see, in the not very distant future, the principle of "Home Rule" exemplified in the dental profession. What element is wanting that is requisite for making ours an independent profession? You have in your ranks men of science of the highest education and culture; men whom her most gracious Majesty has delighted to honour; many, who in addition to their having the L.D.S. degree, are Fellows of the Royal Society, M.D.'s of the College of Physicians, M.R.C.S. and F.R.C.S. of the Colleges of Surgeons of the three Kingdoms, and an army of those who hold "the highest dental degree in Europe," as well as those of the Transatlantic Universities of Harvard and Michigan, down to the representative of the old partners of our ancestors, the barbers. Surely these must represent the collective dental wisdom of the universe, and be quite sufficient to establish your claim to dental "Home Rule."

In my note-book I had jotted down other topics upon which I should have wished to say a few words; but I feel that I have already trespassed too long on your patience.

In conclusion, I ask you to believe me when I say that nothing but a sheer sense of duty to, and a deep regard for, our younger brethren's future welfare, would have induced me to enter upon

this formerly much-debated subject. Of all men, those of us who have individually, through three decades, striven, by avoiding unprofessional conduct, to elevate the profession to which we belong, are personally least interested in its future ; for of necessity we must soon lay down our weapons of warfare, and retire from the fight, and pass away, to be no more seen. But it would be culpably selfish if, with the experience of the past and the present, by which alone we get a glimpse of the future, we did not express our conviction that the dental profession has a great future before it. The advance of dental science has been most rapid, and is still progressing. The demand for dental aid has marvellously increased, and is still increasing ; and the dental profession is destined to be second to none in existence.

Then, I say, go on raising its social status, by individual conduct in your private practice ; and, by combining with the British Dental Association, and by forming local branches of it, throw aside the paltry pride and professional jealousies of your forefathers. March shoulder to shoulder with brethren who may not be quite up to your standard, intellectually or financially. The efforts of all will be needed in the common cause of dental reform, social and legal. Knock hard, and as a profession, independently, at the door of St. Stephen's, and, as yours is a righteous cause, you will overcome all opposition, and victory will be yours.

Central Counties Branch.

At a Meeting of the Central Counties Branch held at 71, Newhall Street, on May 19th, it was decided to hold the Annual Meeting at Shrewsbury, on Friday, July 15th, under the presidency of Mr. W. E. Harding, instead of the latter part of October, the usual date.

PROGRAMME.

- 10. 30 a.m.—Meeting of Council.
- 11.45 a.m.—General Meeting and President's Address.
- 12.45 a.m.—Luncheon at the Raven Hotel, to which the Members are invited by Mr. W. E. Harding, President Elect, and Mr. Roff King.
- 1.15 p.m.—Demonstration in Gold Filling, by L. Matheson, Esq., L.D.S. Demonstration in Plaster Impressions, by Dr. Walker.
- 3.0 p.m.—Excursion to Haughmond Abbey, to which the

Members are also most kindly invited, by Mr. Harding and Mr. King.

6.o. p.m.—Dinner at the Raven Hotel.

Scottish Branch.

THE fifth Annual Meeting of the Scottish Branch was held on the 3rd inst. in the Peacock Hotel, Newhaven (Firth of Forth). WALTER CAMPBELL, L.D.S., of Dundee, President in the chair. Among those present were: Drs. Smith and Reid, Messrs. Wilson, Watson, Matthew, Walker, Platt, Durward, Cormack, Amooore, Cooper, Macleod, Munroe, &c. In deference to the wishes of the Western Branch, and in view of the close proximity of the Annual Meeting in the sister city of Glasgow, the proceedings were confined to statutory and routine business; papers, communications, &c. being reserved for the August meeting.

The SECRETARY having read the minutes, the Treasurer presented his report, which was satisfactory, showing a balance in favour of the branch of £12 5s. 9d.

The following gentlemen, on the motion of Mr. Platt (Stirling), seconded by Mr. Walker (Dundee), were elected office-bearers for 1887-88:—*President*, Andrew Wilson, L.D.S.Ed.; *Vice-President*, Dr. Robert Reid, L.D.S.Eng.; *Treasurer*, Austin Biggs, Esq.; *Secretary*, W. Bowman Macleod, L.D.S.Ed.; *Council*, Dr. Smith, C. Matthew, M. Finlayson, M. Macgregor, J. Brownlie, Glasgow; J. Wells, Berwick; Dr. Williamson, Aberdeen; and W. Campbell, Dundee.

On the recommendation of the Council it was agreed to hold the next Annual Meeting for 1888, at Edinburgh, on Friday, June 2nd.

The PRESIDENT in vacating the chair said,

GENTLEMEN,—The time has now come for me to leave the presidential chair, to which a year ago you so generously re-elected me. I esteem it no little honour to have been placed by you at the head of this Society, and I have always counted it a privilege and a pleasure to come to the meetings. The council, aided by a most efficient secretary, have made the duties of my office light. Our statutory meetings are few, but *other* meetings of council have been called as occasion required, to consider and look into the conduct of those accused of breach of the Dentists Act. Caution,

and I may say charity, have always characterized the counsel you have offered to our parent Society anent such cases. The objects set before the Scottish Branch are fewer and more restricted than that of any other branch of the British Dental Association.

Those who had to do with the formation of this branch were afraid that it might clash with the Odonto-Chirurgical Society, were its objects not somewhat restricted. It is a question worth reconsidering whether the bye-law virtually forbidding all scientific matters might not be altered or rescinded. This Society was formed to do a kind of work for which the Odonto-Chirurgical Society was not well fitted, to be, in short, a kind of outpost station to assist the parent society, "To maintain the honour and interests of the Dental Profession; the maintenance of the spirit and provisions of the Dentists Act by such lawful means as may be necessary." I do not think we have come far short of our duty in these respects, but, as I have said, it is a matter worth considering, whether we ought not to enlarge our sphere of usefulness by accepting any scientific papers or casual communications which may be offered, and thus lend more attraction and give more interest than we can at present secure to our *one meeting* in the year. I do not now think as I did at one time, that this will at all interfere with the success of the Odonto-Chirurgical Society, especially as our meeting is held two or three months after the close of the latter society's meetings. I had a good deal to do with the formation of the bye-law preventing scientific matters from coming before us, but after an experience of four years I think it would now be wise to have this restriction removed and see the result. This change cannot be made, however, until next Annual Meeting, after the statutory notice has been given. Now, gentlemen, I have pleasure in vacating this chair for Mr. Wilson, who brings with him experience, and a wide range of knowledge, and with whom it has ever been a pleasure to me to be associated.

Mr. WILSON was then formally inducted in the Presidency, after which the members and friends dined together.

Eastern Counties Branch.

THE Annual General Meeting will be held at the Athenæum, Bury St. Edmunds, on Tuesday, July 5th. R. W. WHITE, M.R.C.S., L.D.S. Eng., in the chair.

President elect, H. W. Tracy, L.D.S. Edin.

PROGRAMME.

11.30 a.m.—Meeting of the Council.

12 a.m.—Business.

1 p.m.—Luncheon at the Albion Hotel.

2 p.m.—Papers and discussions—"On the Social Influence of the British Dental Association and its Branches," by B. W. Harcourt, Esq. ; on "Regulating Teeth," by S. A. T. Coxon, Esq. Models and appliances will be shown.

At the conclusion of the papers and discussions, some of the many places of interest in Bury St. Edmunds will be visited, including the Norman Tower—considered one of the purest and richest specimens of Norman architecture in Europe—Abbey Gate, Abbot's Bridge, ruins, two fine churches, botanical gardens, &c.

7 p.m.—Dinner at the Albion Hotel.

All Members of the British Dental Association are cordially invited to the Meeting.

Southern Counties Branch.

The Annual Meeting will be held at Croydon, on Saturday, July 16th, under the presidency of Mr. Alderman Rymer. The programme of the day's proceedings is not yet complete ; but it is intended that it shall be a day of pleasant re-union and enjoyment.

Lengthy papers will not be in the ascendant, but rather short communications of practical interest, likely to induce general discussion.

The President invites all the visitors to luncheon, and hopes (weather permitting) to give them a drive through Addington Park.

The dinner will take place at 6.30 (tickets 7s. 6d. each), which will enable visitors to catch available trains from Croydon to all parts.

Members of the Association and its Branches are cordially invited. An early intimation from friends intending to be present is earnestly requested, to enable the necessary arrangements to be made. Such information should be sent not later than July 9th, to Morgan Hughes, Esq. (Messrs. Rymer & Hughes), 4, Wellesley Villas, Wellesley Road, Croydon, who is acting as Honorary Local Secretary.

The information wanted from visitors, is whether they will attend the luncheon, drive and dinner—any or all.

Members of the Branch will oblige by forwarding their annual subscriptions to the Honorary Treasurer, J. H. Redman, Esq., 97, Buckingham Road, Brighton.

ORIGINAL COMMUNICATION.

The Premolars in Man.

By ARTHUR S. UNDERWOOD, M.R.C.S., L.D.S.ENG.

IN a recent able paper, though all too brief, Mr. Wilson of Edinburgh discussed the question of the identity of the missing premolars in man, and, in concluding, alluded to a case communicated by me to the pages of this Journal some years ago. Mr. Wilson deplored the absence of authentic data regarding the case, and even felt himself debarred from drawing any deductions from it because of the scanty history which I had been able to provide. I fully sympathise with this hesitation to generalize upon insufficient data, and wish indeed that it were more common. I also agree with Mr. Wilson in his regret that so remarkable a case should be lacking in any of the historical points of evidence which would render it complete, but I still think that though the facts that can be demonstrated are few, they are of the very highest importance, and that even from what evidence we have in the mere model, a great deal of light may be thrown upon the subject.

The patient, at the time the model was taken, possessed a full complement of sixteen teeth in the lower jaw, all well formed. In the upper she had *two* normal premolars on one side, and *six* normal premolars on the other. Now, considering that Professor Owen did not believe that any case of an excess of normal premolars had ever been put upon record, this alone warrants especial notice being taken of the case. There is, however, more than its peculiarity to commend the case to our notice. In connection with the theory of reversion this model is full of food for reflection. Firstly, all the excessive premolars are of normal shape and size, none of them approximate to the canine type in the least, none bear the faintest resemblance to the adjacent molars. It is a received dogma that, whether the missing pre-

molars be the first two of the series or any others, if the missing teeth were restored we should see something of the easy gradation of *Homalodontotherium*, something to point out how gradual the changes were in the original dentition. It is to these 'lapsus naturæ,' these recollections of a bygone time, that we naturally look for hints and suggestions of the forms and arrangements that prevailed in prehistoric times, but here is a "lapsus" that may be said rather to add to the darkness and obscurity of the subject.

But the absence of an approach in form to neighbouring types of tooth, is not nearly the most striking peculiarity of the case. Reversion or atavism could only account for *four* premolars, and here we have *six*. Premolars are reproduced in excess of the number in which, according to received views, they could ever have been possessed by any remote ancestor who enjoyed the advantages of the full typical dentition. Without wishing to attach too much importance to a single freak of nature, I can only imagine one of two deductions arising from this case—either the teeth that appear in excess of the normal complement are not "harks back" or reversions to some forgotten era in the history of the animal, or the ancestors of this individual at one time possessed six premolars on one side of the upper jaw.

According to the views recently put forward by M. Malassez, the early stages of development recall an era when the animal was provided with an unlimited dentition of a homodont form. When supernumerary teeth arrive at complete development, they mostly assume the simple conical form of teeth belonging to such a dentition. Is it possible that supplemental teeth are simply instances of maturity in germs that usually abort, but which under the new circumstances take on the form of the teeth usually formed by the individual? It is easy to demonstrate that an unlimited number of first stages—of possibilities—of teeth are formed in the human jaws, only a small and definite number of which persist and eventually become erupted, possibly the shape and form of any superfluities that, under exceptional circumstances, may attain a full growth may be more or less a matter of accident.

At any rate existing theories with regard to this subject do not, to my mind, account for the existence of six fully formed premolars on one side of the upper jaw, the two on the other side being present, and, seeing that the case in question plainly presents this peculiarity, I do not think it can be lightly passed over because of the absence of history. It cannot be made to square with the

reversion theory which it violates (*a*) in showing no tendency in any of the premolars to approximate to a canine or to a molar type, and (*b*) in that the number of premolar teeth possessed by the individual was considerably in excess of that which the received formula allots to the typical dentition. Moreover, the occurrence of other supernumerary teeth in the same jaw adds to the difficulty. The fact that the patient had suffered from cleft palate (which is very evident from the model, though I fear, from Mr. Wilson's expressed doubts, that my drawing did not make it sufficiently plain) does not seem to me a fact of any particular importance, unless it be that the power to produce an *embarras de richesses* in the matter of teeth should have coincided with the inability to complete the act of development in the matter of bone. All I attach importance to is the number and appearance of the extra teeth, and the importance of this cannot, I think, be over-rated. It is, no doubt, a thousand pities that the facts about the temporary dentition are not forthcoming, but I do not think this absence seriously detracts from the morphological interest of this unique deformity.

PARLIAMENTARY AND LEGAL INTELLIGENCE.

WE copy the following notice from the *Lancet* of June 4th:—

Royal College of Surgeons of England.

The following is the abstract of a petition from the Royal College of Surgeons of England, to the Queen for a Supplementary Charter. Copies may be obtained on application by Fellows and Members of the college.

1. To enable the college to hold "lands, tenements, rents, and hereditaments" of an annual value not exceeding £20,000, instead of £2000 as by present Charter.
2. To enable the Council to determine by rules and regulations, instead of, as at present, by bye-laws, the conditions of admission to the Fellowship by examination; and to determine by bye-law, instead of by Charter, the fees payable for such Fellowship.
3. To empower the Council to elect to the Fellowship Members of twenty years' standing, not exceeding ten (instead of two) in each year, on the payment of the same fee as required for the Fellowship by examination.
4. To authorise the election by the Council of any number of persons, not exceeding two in each year, whether a member or

members of the college or not, having, in the opinion of the Council, to be ascertained and expressed in such manner as the Council may from time to time think fit and direct, rendered distinguished service in the advancement of surgery or the sciences allied thereto, such persons to be and be called Honorary Fellows. Such Honorary Fellows not to pay any fee, and to be ineligible to vote for the election of members of the Council.

5. To provide that Fellows may vote in the election of the Council either in person or by voting papers, such papers to be signed, authenticated, and delivered in such manner as the Council shall from time to time think fit and direct. No election of members of Council to be valid unless there shall be present at the meeting for the purpose of such election, such number of Fellows as the Council may from time to time think fit and direct.

6. To render Fellows of ten (instead of fourteen) years' standing eligible for election as members of Council, and to abolish the restriction in regard to their practising as apothecaries.

7. To simplify the mode of nomination of Fellows, candidates for election to the Council, by requiring in each case only one nomination paper to be signed by three Fellows.

8. To dissolve the Midwifery Board.

9. To enable the Council to increase the number of members of the Board of Examiners in dental surgery, and to require that those members of the Board described as "persons skilled in dental surgery," who shall in future be elected, shall be persons registered under the Dentists Act of 1878.

May 23rd, 1887.

EDWARD TRIMMER, Secretary.

The General Medical Council *v.* Partridge.

The *Times* for May 27th, in the report of the proceedings of the Court of Queen's Bench (before Mr. Justice Mathew and Mr. Justice A. L. Smith), gave an abstract of the hearing of the case of Reg. *v.* The General Council of Medical Education *ex parte* Partridge, the report of which we subjoin, as likely to interest our readers.

"REG. *v.* THE GENERAL COUNCIL OF MEDICAL EDUCATION, *EX PARTE* PARTRIDGE.

"This was an application for a *mandamus* directing the General Registrar of the Council of Medical Education to restore to the

Dentists' Register the name of Henry Francis Partridge, pursuant to the Dentist Act, 1878, section 14. Partridge had been in practice in London as a dentist since 1867. In 1878 the Dentist Act was passed, whereby it was intended to create a register of those qualified to practise as dentists. In the same year Partridge obtained a diploma as licentiate in dental surgery from the Royal College of Surgeons, Dublin, and his name and qualification were entered on the register. Section 6 (c) of the Act provides that persons engaged in the practice of dentistry at the passing of the Act shall be entitled to registration, and by section 7 a person so applying shall sign a declaration according to the form in the schedule to the Act. Partridge signed no declaration necessary to have his name registered as practising before the passing of the Act. In July, 1885, his diploma was cancelled, on the ground that he had advertised in connection with his profession, which was contrary to the declaration he signed when he obtained his diploma, which declaration said :—' I shall not attract business by advertising or any other unbecoming practice, and I agree that such diploma shall be cancelled on it being proven that I have done so.' Notice was sent from the secretary of the College of Surgeons, Ireland, to the registrar of the Medical Council, stating that Partridge's diploma had been cancelled; thereupon the Council, after duly considering the matter, erased his name from the register.

"Mr. KENNEDY, Q.C. (Mr. Mackenzie with him), for the Medical Council, contended that they were only bound to register his name so long as he was a licentiate. If he was bound to be on the register they would have a name with an erased qualification. He only asked to be registered in respect of his diploma from the Royal College of Surgeons in Ireland; he never produced a declaration that he was practising dentistry at the time of the passing of the Act. The Act gives the registrar power to act without requiring the intervention of the constituent body.

"Mr. JUSTICE MATHEW: Would the medical man have a right to appeal to the Council, supposed the constituent body wrongly cancelled his diploma? No; if they wrongly cancelled his licence, his remedy is to proceed against them. Section 13 gives the Council power to erase the name under certain circumstances where his conduct has been disgraceful in a professional respect, in cases where the constituent body have not acted.

"Mr. JUSTICE SMITH: Where does it say that the name must be

erased upon loss of diploma? It is a necessary corollary of section 7.

“Mr. JUSTICE MATHEW: Suppose he came from Ireland to England and the Irish body cancelled his diploma, is his name to be erased? We have only to look to his qualification.

“Mr. JUSTICE MATHEW: When he is put on, he is properly done so. The object is to provide a register of persons who are qualified. It is only in cases of very gross misconduct that the Act thought fit to give the Council the right to strike off the register. The Council say that as they respect the granting of the diploma, so they have to recognise the power to take it away.

“Mr. FINLAY, Q.C. (Mr. Lyon with him), argued in support of the rule. By the Medical Act, 1858, section 28, the Council had power to erase. This section must have been under consideration of the framers of the Act of 1878, and been advisably omitted from the Act of 1878. Suppose a dentist adopted a particular theory obnoxious to his own college, it follows from the omission of section 28 of the Act of 1858 from the Act of 1878 that the argument of the Council is untenable. The right to be on the register is having the necessary qualification at the time of registration. Once on the register, his name cannot be struck off except for offences under section 12 and 13 of the Act, 1878. It is not an annual register.

“At the conclusion of the arguments their Lordships reserved judgment.”

REPORTS OF SOCIETIES AND OTHER MEETINGS.

General Medical Council.

Thursday, May 19th.

MR. JOHN MARSHALL, president, in the chair.

DENTAL BUSINESS.

REV. DR. HAUGHTON had given notice of the following motion

“That British physicians and surgeons, holding foreign diplomas in dentistry, shall have the option of their names and titles being recorded either on the British or Foreign lists at their own discretion, without being required to appear on both lists as if different persons, and that, in any case, their titles be recorded in decent Latin, and not in the ‘jargon’ used in medical prescriptions.”

In referring to it he said : This notice of motion was given before I was in full possession of the facts of the case, and when I came to London Mr. Miller showed me that the question had been under consideration here for six weeks, that Mr. Muir Mackenzie's opinion had been taken on it, and that the present Register of 1887 is exactly in conformity with the requirements of the Dental Act. He has shown me a way by which any dentist in the position that a friend of mine represented himself to be in, can get relief. You must, in this Register elect, either be a British dentist or a foreign dentist. If you are a British dentist, you can put down your British qualifications ; if you are a foreign dentist, although a British subject, you cannot put your British qualifications in the foreign register, and *vice versa*.

I need not say that the qualification in dentistry of the University of Harvard is high in the list, and gentlemen holding that are desirous to have it on the register. It is not the money that these gentlemen object to pay, but it is the doubtful identity that they complain of. Mr. Miller shows me that by cross references the same man is indicated. I speak on behalf of a very distinguished scholar, a Fellow of the College of Surgeons, and a Graduate of Dublin and of Harvard. After Mr. Miller's explanation, as far as the first part of the motion is concerned, I ask leave to withdraw it. Mr. Miller and I have arranged about the Latin at the end also, so that I may perhaps withdraw that too. The Latin is very curious. On page 226, the first name on the list is "Bell, D.M.D., University of Harvard, 1872." That is quite correct. Then there is "Herbert Cox, D.D.S., University of Michigan." That is also correct, remembering that the first name is in Latin and the second in English. But "D.D.S." is returned in page 24, and "D.D.M." for the University of Harvard. The puzzle is what "D.D.M." signifies. Knowing that the University of Michigan gives its title in English, and Harvard in Latin "D.D.M." does not represent what it ought to. I consulted a person skilled in this particular kind of Latin, and he told me I was wrong, that they were both English, "D.D.M." meaning "Doctor of Divinity gone Mad," and "D.D.S.," "Doctor of Divinity gone Sulky. Now as both those things often occur no doubt he is correct. I withdraw the whole thing.

The Odontological Society of Great Britain.

At the usual monthly meeting of this Society, held on the 2nd ult., Mr. C. S. TOMES, F.R.S., President, in the chair, Dr. St. GEORGE ELLIOTT showed in action a very handy little hot-air engine, made by Koerber, of Poland Street. It took up but little room, was noiseless in action, and did not give off products of combustion. It was not, he said, powerful enough for general laboratory work, but practitioners who only wanted a machine of small power for running the dental engine would find it very convenient.

Dr. WALKER showed some models sent by Mr. J. Humphreys, of Birmingham, amongst which were two from the mouth of a strong, healthy man, aged twenty-three, showing the teeth much worn, many of them being level with the gum. The dentine was very hard, and the pulps completely calcified. The patient had always enjoyed good health, and had never suffered any pain. Mr. Humphreys had called it a case of "erosion," but Dr. Walker thought it was rather a case of attrition than of true erosion.

Mr. E. LLOYD WILLIAMS showed an improved form of hot-air syringe, designed by Mr. Rowney, of Derby. The current of air was produced by a small foot-blower, and passed through a coil of brass tube heated by a small Bunsen flame. A good working temperature could be obtained in a little over a minute, and was maintained for three or four minutes; it was readily controlled by regulating the flame. Mr. Lloyd Williams thought that members who were in the habit of using hot air in every-day practice would find this instrument of great practical use.

Dr. GEO. CUNNINGHAM, of Cambridge, then read a paper on "The Physiological Action of Cocaine on the Lower Animals and Man, and its Uses in Dental Surgery."

Dr. Cunningham said that for some time past he had been endeavouring to investigate the action of cocaine, both in the laboratory and in private practice, and his experience, based upon carefully recorded cases, differed most materially from that which had been laid before the Society by Messrs. Hunt, Brunton, and others.

With regard to the local application of cocaine and its salts, there could be no doubt that, though it had failed to fulfil the too-sanguine anticipations held out on its first introduction, it had

nevertheless, established for itself a permanent place in the dental pharmacopœia. Its effects when introduced into the circulation were, however, of far greater importance, and to these he should mainly confine himself.

A large number of experiments on frogs had been carried out by Dr. Biggs, of New York, and the results published in the *Journal of the American Medical Association* for 1885, and another very complete series of experiments on rabbits, dogs, cats, and pigeons, as well as frogs, had been carried out by Von Aurep as far back as 1879. Dr. Cunningham gave a summary of the results obtained. In the frog the effect on the heart was most noticeable, whilst in warm-blooded animals its action on the nervous and respiratory systems was more marked.

The effect of cocaine on the frog's heart was at first to render its action slower and more forcible, but in larger or repeated doses its effect was to weaken, and finally to paralyse it, the arrest occurring in diastole. In warm-blooded animals medium doses of cocaine accelerate the heart's action, but large doses have the opposite effect, though complete arrest does not take place. When death occurs, it is due to paralysis of respiration, the heart continuing to beat. The effect on the circulation is first to increase the blood-pressure, the rise being followed, if the dose is a large one, by a rapid and great fall. The respiration, also, is accelerated by small doses, whilst after larger doses there is great acceleration, interrupted by brief periods of cessation; or the acceleration may be followed by serious dyspnœa, and even by complete paralysis of respiration.

Having described with some fulness the toxic effects of cocaine on the lower animals, Dr. Cunningham proceeded to a consideration of its action on the human subject. Here, as already stated, his record differed materially from the experiences of those dental practitioners who had warmly advocated the use of cocaine by injection, as regards the frequency of disagreeable, if not dangerous, toxic effects. He read short notes of its action in some thirty carefully recorded cases, of which the following is a summary:—

All the patients except two were strong, healthy young adults, or men in the prime of life. The exceptions were two middle-aged ladies, one of whom was a confirmed invalid, and the other in such a bad state of health that her medical attendant would not allow her to take gas, ether, or chloroform; yet, contrary to what might have been expected, the constitutional symptoms in

these cases were the least noticeable of the whole series. Nor did nervous patients seem either more or less susceptible to the toxic influence of the drug than those of calmer temperament, since the two cases in which the most alarming symptoms resulted from its administration were respectively those of an extremely nervous and of a very stolid subject, whilst the two most successful cases of the series were both extremely nervous individuals.

Nor could any constant relation be observed between the amount the dose and the effects produced. In both of the cases in which the maximum dose ($1\frac{1}{2}$ grs.) was given, the result was good, whilst the worst cases were those in which the medium dose (1 gr.) was given; even the minimum dose ($\frac{1}{2}$ gr.) gave rise to disagreeable results (fainting, &c.) in three cases, whilst it failed to produce any effect in a fourth. Moreover, the effect of the same dose on the same individual was found to vary considerably at different times.

With regard to the nature of the operation and the results obtained: the table included twelve cases of extraction; in six of these—of which five were stated to be “easy,” performed on four individuals—the pain was slight. In one case of “difficult” extraction the patient suffered “very little pain;” in another serious constitutional symptoms occurred, and the remaining four were failures. For extirpation of the pulp it was a success in one case, and failed to relieve the pain in three. For the excavation of sensitive dentine it gave relief in two cases, and failed in two. The injection relieved the severe pain of acute periostitis, but did not, as a rule, produce insensibility to pressure; this was met with only in cases where serious general symptoms also occurred. Dr. Cunningham’s opinion is that in the successful cases the drug acts quite as much as a general stimulant as it does locally as an anæsthetic, *i.e.*, that it gives the patient resolution and fortitude, and the experiences related by some of the patients seem to bear out this conclusion.

Out of nineteen individuals experimented on, only three, including the two invalids, were entirely free from subjective symptoms, such as faintness, giddiness, uneasiness in the region of the heart, &c., whilst noticeable objective symptoms, such as irregular respiration, muscular contractions, profuse perspiration, &c., occurred in all but six. Dr. Cunningham remarked that as his attention was partly occupied by the dental operation, slight evidences of this sort might easily have escaped observation. In at

least three cases the symptoms produced were decidedly serious, and in one case were such as to cause him very great anxiety, the patient continuing in a state of syncope for nearly two hours, with dyspnoea, convulsions, &c. General restlessness and loquacity were very common symptoms — both of them very undesirable with reference to dental operations. In the more severe cases the stage of excitement was succeeded by a state of drowsiness and stupor. The after effects, even in those cases which gave rise to anxiety at the time, were comparatively slight, consisting only of loss of appetite, sleeplessness, and some amount of nervous depression.

Dr. Cunningham summed up his experience briefly as follows: The administration of cocaine by injection, preferably by small doses ($\frac{1}{2}$ gr.), repeated at intervals, may have a limited field of usefulness in prolonged dental operations. It appeared, however, from one of his cases, that very alarming results might follow the administration of even an ordinary dose (1 gr.) to an apparently healthy individual, and it was not improbable that even more serious effects might be met with in the course of a more extended use of the drug. It should, therefore, only be resorted to in exceptional cases.

As an anæsthetic for the painless extraction of teeth, it was not to be compared with nitrous oxide, either with regard to its efficiency, its safety, or its certainty of action.

Mr. HERN followed with a paper on the same subject, "Cocaine, and its use as a Local Anæsthetic in Dental Surgery."

There was always a tendency during the *furore* which frequently heralded the appearance of a new remedy, to indulge in romantic fancies as to its virtues, and to imagine that a panacea had been discovered, conclusions which further experience did not usually substantiate. The introduction of cocaine two or three years ago, as an agent for producing local anæsthesia, roused such widespread excitement, both amongst those engaged in the practice of general surgery and specialists, that a sort of cocaine fever prevailed for a considerable time. The drug having, however, now undergone a fair period of probation, it might be useful to weigh the pros and cons of its actions and uses, and to see how far the conclusions thus arrived at would confirm or modify any existing opinions as to its merits. Moreover, so antagonistic and irreconcilable had been the results obtained, and the opinions published, with regard to cocaine, in recent medical and dental literature, that many practitioners still remained in a state of suspended

judgment as to its practical uses, and might probably be glad of some assistance in coming to a decision.

After giving a short account of the physiological action of cocaine, as ascertained by the experiments of Drs. Hughes Bennett, Biggs, of New York, and others, which, of course, agreed closely with that given by Dr. Cunningham, Mr. Hern referred to cases in which large doses—in one instance 23, and in another 32 grains—had been taken by the mouth, without any very serious results following, and to others in which 23 grains were administered hypodermically in one day, and 48 grs. injected *per rectum*, with impunity; on the other hand, 20 grs. given *per rectum* had produced a fatal result.

He then proceeded to consider its therapeutic uses, and to quote some of the curiously divergent opinions expressed by different writers on the subject. Thus, one writer stated that he had used citrate of cocaine as an obtundent for sensitive dentine, with uniform success; whilst another reported that it was slow and inconstant in action, sometimes causing considerable pain, and sometimes producing no effect whatever. Mr. Hern agreed with the latter. The opinions expressed with regard to its value as an application to exposed pulps were equally contradictory, though he himself had found a strong alcoholic solution of the hydrochlorate useful for this purpose.

Most observers agreed that it was useful as a local application, preparatory to superficial operations on the oral mucous membranes, but useless for the relief of pain after extraction, or of odontalgia.

It was, however, more especially in its application as a hypodermic injection that cocaine had gained renown, the local effects produced by this mode of administration being more definite and constant than when the drug was merely applied superficially. But unfortunately its reputation when thus used was not wholly unblemished, many cases having been reported of grave toxic effects, and still more of unpleasant constitutional symptoms, having resulted from it. Two methods of injection had been practised—the deep injection, the object of which was to anæsthetise the nerve trunks, and produce a central effect; and the submucous, the anæsthetic effect of which was purely peripheral and local. The latter was the method usually adopted, the deep injection being attended with some risk of wounding important structures, and not offering any compensating advantages.

The recorded experience of practitioners who had employed the submucous injection varied greatly as regards the immunity from pain and absence of constitutional symptoms, some having found the result of the operation almost uniformly satisfactory, whilst others report a considerable proportion of failures, and the occasional occurrence of alarming constitutional symptoms.

Mr. Hern's experience, based on ninety cases of extraction, was, that about 50 per cent. were really successful, no pain being complained of; in about 43 per cent. the pain was reduced, but not entirely removed, and in seven per cent. it was considerable, and apparently not at all relieved. In three cases somewhat distressing toxic effects were produced, and in fifteen others slight constitutional symptoms were observed, only lasting for a few minutes. The amount injected was in two-thirds of the cases half a grain, and in only one case exceeded a grain. Of Dr. Cunningham's cases more than half had a grain or more, and in three-fourths of them the amount injected exceeded half a grain.

Mr. Hern summed up his experience as follows :—

Doses of one grain and upwards, hypodermically injected, are comparatively frequently followed by constitutional symptoms, which, if not actually grave, are nevertheless distressing and disagreeable.

Doses of which the maximum is half a grain, though not absolutely free from constitutional effects, are very much less frequently followed by such; the symptoms, if any, produced, being for the most part transient and unimportant, the unpleasantness commonly passing off in a few minutes.

The anæsthetic results of half-grain doses for the extraction of teeth lead one to think that any further serious reduction in amount would be insufficient to relieve the pain of the operation.

In judging of the practical use of cocaine as an anæsthetic for extractions, and comparing it with the agents now in use, the following facts had to be considered :—the physical barrier to injection which the bony alveolus interposes; the pain, however slight, due to the puncture of the syringe; the mental suspense due to the necessity of waiting several minutes between the injection and operation; the full consciousness under which the operation is performed; the varying idiosyncrasy of patients to the drug; the inconstancy of production of complete anæsthesia; the necessity of limiting the dose, so that only one part of the mouth can be safely anæsthetised for the same patient at a given

time, and that only such as to allow of one, or at most two, teeth being removed. These all combined to relegate the drug to a subordinate and secondary position, leaving nitrous oxide gas in the possession of the field as the *facile princeps* for the vast majority of such operations. Other than for extraction there were various operations in which cocaine could be beneficially employed as an obtunding agent, as a submucous injection in dental practice, such as for wedges, clamps, separators, as recommended by Mr. Smale, the excision of gum tissue, removal of small growths, opening of deep-seated abscesses, reduction of pain in manipulation of fractured maxilla for models or splints, &c. ; with doses not exceeding half a grain of the hydrochlorate, such operations might be performed in a painless manner, and without serious risk of toxic symptoms.

In judging of the results of all local anæsthetics, the effect of imagination on the mind of the patient had to be eliminated. With due regard to this, he believed that cocaine, although not all that could be wished, was yet one of the most powerful local anæsthetics which had been introduced to the profession of late years, and was on the whole a valuable and material addition to the Dental Pharmacopœia.

On the conclusion of the paper, Mr. J. S. TURNER remarked that it would be impossible to enter upon a profitable discussion of the large amount of matter which had been submitted for their consideration that evening, unless some opportunity was given for its proper digestion and assimilation. As the business of the following meeting had probably been already settled, he suggested the discussion on cocaine should be adjourned till November, by which time the members would have ample opportunities of enlarging their experience.

After some discussion this proposition was put to the meeting, and carried by a considerable majority.

The PRESIDENT then proposed a vote of thanks to Messrs. Hern and Cunningham for their papers, and to the contributors of casual communications, and the Society adjourned.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Cocaine Dosage and Cocaine Addiction.*

By J. B. MATTISON, M.D.

THE recent sad story of the Russian surgeon's suicide from sorrow or remorse due to his belief that a patient had died from an overdose of cocaine points a moral, the import of which demands more than a passing notice. No advent in the therapeutic arena during the last decade has been attended with such varied and extensive claims for favour as cocaine. Its marvellous effect in ophthalmic surgery roused a spirit of experimental research in other directions which has added largely to its well-proved power for good; but, as has been well observed, a potency for good implies a potency for harm, and the risk impends of its ardent advocates being carried by over-enthusiasm beyond the limit of a safe regard for the welfare of their patients or themselves, that may imperil an otherwise well-founded success. Surely it is high time to draw the line, to revoice a warning as to the use and abuse of this valued, but at the same time toxic, drug, lest the roll of alarming, dangerous, and fatal effects from its ignorant or incautious use be sadly extended, and a reaction ensue that, by creating distrust within and without the profession, will damage its good repute, and hinder its use in cases where it would be almost certain of serving us well. And the need of this seems all the more called for in view of opinions expressed during the past year, in certain quarters, affirming the harmless character of cocaine—opinions which, I am convinced, are at variance with well-accredited facts, and should not be allowed to pass uncontradicted.

Cocaine seems to have secured for itself a more than usual share of attention apart from the professional press. One metropolitan daily, in particular, has again and again given its columns to a discussion of the topic, and in a somewhat lengthy article not long ago an "eminent but unnamed specialist"—Dr. Francke H. Bosworth—was reported as saying, "There is not a well-authenticated case on record as yet where cocaine has effected injury." In view of cases cited in this paper, and others elsewhere recorded, such a statement is no longer tenable, and any conclusion based thereon as to the harmless nature of cocaine is

* Read before the King's County Medical Society, Feb. 15th, 1887.

misleading and incorrect. And the evidence herewith presented weighs even more heavily against an assertion by Dr. William A. Hammond, at a recent meeting of the New York Neurological Society, in the course of his "Remarks on Cocaine and the so-called Cocaine Habit," when, after narrating his taking of eighteen grains as a subcutaneous dose, he asserted "he did not believe any dose that could be taken was dangerous." What might be the outcome of such an opinion put in practice? The Russian surgeon's error of judgment, fatal to his patient and himself, was largely due to his reliance on the asserted use by other surgeons of large doses without ill effect. Might not a like result follow an incautious dependence on Dr. Hammond's disbelief in the toxic power of cocaine? The *Medical Record* (New York) well said of Professor Kolomnin's case, "The experience, though so sad, may not be without its lesson," and put a very pertinent query as to whether "there are not other surgeons who could report very serious if not fatal results from injudiciously or ignorantly using too large a dose of cocaine." Fifty cases herewith noted attest a power in this drug on some patients that warrants caution with all.

Germane to the subject of acute cocaine toxæmia is that of cocaine addiction—these notes are preliminary to a more extensive paper on cocaine inebriety—the existence of which Dr. Hammond denies. He took half a dozen doses, at intervals of from one to four days, and says "he acquired no habit." But to argue from that that there is no danger of addiction is absurd. Such evidence is worthless. Dr. Hammond might do the same thing with morphia; more, he might take morphia subcutaneously daily for a month or two without creating a "habit"—albeit its ensnaring power is well admitted,—and yet that would not prove its freedom from danger. Not at all; it would merely show his exceptional strength to resist. Many, under a like pressure, would surely succumb. Supporting this opinion, I quote from the last report of Dr. Orpheus Everts (Cincinnati Sanitarium), a gentleman well known in alienistic circles, which report was kindly sent me after my paper was written, who says: "A distinguished physician of New York has recently reported personal experiences tending to discredit the claim that a cocaine habit corresponding to the morphine habit is acquirable. The judgment of this distinguished physician is based upon the evidence of personal experience reported by himself, he having failed to acquire the habit, or

any especial fondness for the specific effects of the drug experienced by the hypodermic injection of one, two, three, and finally eighteen grains of the salt, on five or six different occasions in the evening before going to bed. But for the great reputation of this physician as an author and observer of facts, this denial would have but little weight. The testimony is both bad and insufficient. Bad, because reported by himself: the testimony of an intoxicated person respecting his experiences while intoxicated being proverbially untrustworthy; and insufficient, because the experiment was not continued long enough. Many instances might be cited of total failure to establish the morphine habit or habitual drunkenness by the use of six or seven doses of morphine, or six or seven drinks of whisky, once a day, for six or seven days in succession. It is often the case that such experiences end with disgust for the drugs used, instead of a desire to continue their use. There is also much and accumulating testimony by competent observers to the fact of such a habit as is alleged respecting cocaine, which a single opinion will not invalidate, however worthy of consideration."

Cocainism is not the outcome of using the drug at long intervals. Its transient effect and the demand of an impaired nerve status compel frequent taking—more than alcohol or opium—so that *habitués* have been known to take it ten, twenty, or more times daily; and it is this—growing by what it feeds on—that tends to create and continue the disease. In the early days of chloral one point claimed in its favour was a freedom from risk of "habit," a claim long ago exploded, as cases of chloralism well prove; and yet I venture to assert that there are more cases of cocaine taking in this country to-day—less than three years since its arrival—than of chloral after a period more than six times as long. Dr. Hammond says there may be instances of cocainism as rare as chronic tea taking, and of cases with or after habitual alcohol or opium using; but, as for giving up the use of the drug, he believes every cocaine taker could if he chose. The same opinion regarding opium obtains among some medical men, and the only effective argument against such a fallacy is to place those who hold it under power of that drug, and then have them prove their precept by their practice. While admitting that most instances of cocaine taking are, for obvious reasons, in those who have been or are alcohol or opium *habitués*, especially the latter, I maintain there are cases of pure, primary addiction, and that the number is in-

creasing at home and abroad. Foreign writers have noted them, and they will figure in our records. Notes of one such are here given ; others are at command. My experience with a number of cocaine cases makes to me two things certain—there is a pernicious power *per se* in this drug, and it finds in the opium *habitué* a peculiar condition that specially favours its ill effects, making it, for such patients, as has well been said, the “devil’s own device” to still further enslave. And this opinion is that of others, for it is the testimony, without exception, so far as I know, of those who have had to do with this disease, that as an intoxicant cocaine is more dangerous than alcohol or opium, and that inebriety resulting from its use is more marked and unyielding than any other form. Dr. Shrady, in the *Medical Record* of Nov. 28th, 1885, says : “To some persons nothing is more fascinating than indulgence in cocaine. It relieves the sense of exhaustion, dispels mental depression, and produces a delicious sense of exhilaration and well-being. The after-effects are at first slight, almost imperceptible, but continual indulgence finally creates a craving which must be satisfied ; the individual then becomes nervous, tremulous, sleepless, without appetite, and he is at last reduced to a condition of pitiable neurasthenia.” Dr. A. B. Shaw, Physician to St. Vincent Asylum for the Insane, St. Louis, asserts : “Once a man flies to cocaine for relief from ‘cares that annoy,’ he generally continues with such rapid strides towards such complete subjugation to its bewitching thralldom as but few will ever be rescued from by any power of will which they may be able to bring to their aid.” Dr. Everts writes : “It is not only not an antidote to opium poisoning—or, more properly speaking, the organic demand for such drug effects as have been acquired by use—but is itself a fascinating and dangerous intoxicant, the effects of which may be more difficult to counteract and renounce than are those of opium or its derivatives.” Dr. Hughes declares it “a remedy to be used with extreme caution and prudence internally, and the large doses reported as having been given are not ordinarily safe. It will bear watching. It crazes and kills quicker than opium. The possibilities for immediate harm are only not great, but the likelihood of remote damage when tolerance is established is not small. The cocaine habit, more pernicious than the morphine neurosis, is the certain entailment of its frequent administration, and its thralldom is far more tyrannical than the slavery of opium.” Erlenmeyer calls cocaine the third scourge of humanity, alcohol and opium

being the first and second ; and Erlenmeyer is right as to toxic neuroses. He says : "Its characteristic effects are vaso-motor paralysis, accelerated pulse, profuse sweats, dyspnœa and syncope, failure of general nutrition, eyes sunken, skin cadaveric, with mental trouble that sometimes needs restraint ;" and I am positive, from cases under my care, that he is correct. I think it for many, notably the large and enlarging number of opium and alcohol *habitues*, the most fascinating, seductive, dangerous, and destructive drug extant ; and while admitting its great value in various disordered conditions, earnestly warn all against its careless administration in these cases, and especially insist on the great danger of self-injecting, a course almost certain to entail added ill. To the man who has gone down under opium, and who thinks of taking to cocaine in the hope of being lifted out of the mire, I would say, "Don't," lest he sink the deeper. I have yet to learn of a single instance in which such an effort reached success, but know of many cases where failure followed, or worse—cocaine or coca morphia addiction. And the need of caution against free and frequent use obtains in other cases, for there may come a demand for continued taking that will not be denied.

To summarise. Cocaine may be toxic, sometimes deadly, in large doses. It may give rise to dangerous, or even fatal, symptoms in doses usually deemed safe. The danger, near and remote, is greatest when given under the skin. It may produce a diseased condition, in which the will is prostrate and the patient powerless—a true toxic neurosis, more marked and less hopeful than that from alcohol or opium. Such being my belief, I regard Dr. Hammond's statements mistaken, and his conclusions rash and dangerous.—*Lancet*.

A Suggested Improvement in Ether Inhalers.

To the Editor of The LANCET.

SIRS,—The object of this letter is to call attention to the fact, as it appears to me, that the arrangement of anæsthetic inhalers has not kept pace with discoveries in medicine, at all events of the bacteriological branch, and to suggest one remedy which seems to me successful so far as Clover's ether inhaler (than which I know none better) is concerned. Almost as soon as I commenced to administer ether, it struck

me that for patient after patient to respire air from a bag which in the meantime had not been cleansed was certainly an indelicate proceeding. If patients were aware that they were doing so, many of them would object to submit to it. But it was not until I was one evening listening to a discussion on tubercle at the West London Medico-Chirurgical Society that it occurred to me that this repeated use of the same bag was also possibly injurious, for most believe now in the tubercle bacillus, and practically there is, it seems to me, every facility for its getting into the air-bag of an ether inhaler, such as Clover's, supposing the patient using it to be suffering from phthisis, possibly undiscovered. Again, patients may be anæsthetised while developing infectious zymotic disease, and I am not sure that in this way such diseases may not have been propagated. If these premisses are conceded, what is the remedy? I am informed by an eminent physiologist that the ether would not render the bacillus or germ inert. Well, then, the apparatus should be cleansed. This is not difficult, except as regards the air-bag, and the improvement I would suggest is an india-rubber bag the same size as that now in use, but of as thin a material as possible (it could scarcely be made too thin), so that it may be of so little cost that there would be no hesitation in throwing it away after use, a new one being used for each patient. Messrs. Maw, Son, and Thompson, of Aldersgate Street, have been very kind in preparing samples of the proposed bag for me. It would be possible to keep, say, half-a-dozen of the ordinary bags going—turning them inside out after use, cleansing and drying them before use again; but this would be less certain and more troublesome than renewing the very much cheaper bag which I have described.

I am, Sir, yours obediently,

RICKARD W. LLOYD, M.R.C.S.
Anæsthetist to the West London Hospital.

Some Points in the Selection and Administration of Anæsthetics.

DR. HEWITT read a paper upon this subject at the West-London Medico-Chirurgical Society, and said that he wished to limit his remarks to the consideration of the following points:—

1. The best method of administering nitrous oxide and ether,

either in succession or in combination. 2. The prevention of vomiting during or after the administration of an anæsthetic. 3. The danger of inducing general anæsthesia in persons so suffering from obstructive dyspnœa. 4. The possibility of dangerous symptoms occurring from the administration of opium or morphine prior to chloroform, ether, or other anæsthetics. He exhibited an apparatus which he had used for three years in hospital and private practice. It consisted of a Clover's portable ether inhaler fitted with a special form of face-piece, and with a bag capable of holding two gallons of gas. By means of this apparatus any desired combination of nitrous oxide and ether could be given. The amount of gas in the bag was always sufficient, when administered with the face-piece shown, to anæsthetise a patient before gradually admixing the ether vapour ; and the whole apparatus was portable and could be changed before entering the room in which the operation was to be performed. By means of this apparatus there was no sudden transition from nitrous oxide to ether, as when face-pieces were changed during the administration. Vomiting could be prevented by rapid and deep anæsthesia. In a large number of cases he had given half a grain of cocaine in half an ounce of water shortly before the administration of an anæsthetic. This was done with the object of lessening the sensibility of the gastric mucous membrane. Vomiting after anæsthetics was best prevented by keeping the patient upon his side, and by moving him as little as possible. The danger of inducing anæsthetic sleep in persons suffering from obstructive dyspnœa was then considered. Patients in this condition were dependent for their existence upon an increased activity of their respiratory mechanism, and failure of respiration was very likely to ensue under chloroform or ether.

Mr. LLOYD showed an improvement in ether inhalers, which consisted in a bag of very fine indiarubber, the cost of which would be found to be so immaterial that one could be used for each patient anæsthetised. The bag would, of course, take the place of the ordinary bag as used at present, and would be destroyed after use ; thus the ether apparatus could not become a source of infection by either the tubercle bacillus or any infectious disease.

Mr. DAVIS said that chloroform was the best anæsthetic in ovariectomy.

Mr. MACKINLAY remarked that he always insisted upon a patient being deeply under the influence of an anæsthetic before dividing

the optic nerve in enucleation of the eyeball. Partial anæsthesia, he thought, was in such cases fraught with some danger.

Mr. ALDERTON related the case of a man who died under ether, who had been admitted for a small operation upon the mouth. He deprecated the custom of admitting patients into hospitals, and hurriedly operating upon them without preparing them.—*Lancet*.

Polymorphism of the Fungus of Thrush.

CULTIVATED in gelatine, M. Andry finds that the fungus of thrush gives rise, at the end of five or six days, to a large number of small secondary masses, white and mammillated, in juxtaposition to the original growth introduced. On agar-agar at a higher temperature the vegetation is more rapid, but the mammillated aspect is less obvious. The multiplication is still more rapid when glycerised agar is employed, and on potato its growth is also successful. In these various cultivations no spores were found, but cells of oval form, of greater or less dimensions, arranged in a chain, in the angles of which secondary cellules may arise in mycelial expansions, altogether similar to yeasts. But sown in bouillon these organisms turn the liquid turbid at the end of two or three days, and a sediment of whitish flakes, consisting of agglomerations and mycelium of cellules—the true *oidium albicans*—is found. In wine the mycelial growth flourishes; an acid medium favours their multiplication, which borax prevents. The form of *bacterium aceti* has not been discovered in these cultures. Thus the pathogenic organism of Muguet develops in two different fashions. In liquid bouillon it throws out profusely mycelial expansions, and is in the hey-day of its vigour; it is then a *saccharomyces*. In a solid medium, on the other hand, it retains its condition of an *oidium*, being but slightly different from certain fungi; in this state it may be regarded as the spore of which the mycelium has remained in an embryonic state.—*Lancet*.

NEW INVENTIONS

Steel Gas Bottles.

OUR attention has been called to a steel gas bottle arrangement, made for Dr. R. J. Freeman, by Mr. J. F. Blennerhasset, of 1A, Vernon Street, Pentonville, W.C., which though anticipating by several years some advantages of recently introduced forms, is not so well known as it deserves to be.

As will be seen by the illustration herewith, the bottles lie horizontally, with vertical key spindles convenient to the foot, as in the form we noticed in our April number; the valve, however, being inserted in the centre of the bottle side instead of in a contracted neck at one end. This compact cylindrical form would seem to be favourable to strength and portability; and extreme lightness has evidently been obtained, as Mr. Blennerhasset states that two "fifty gallon" bottles with gas, weigh a little over eight pounds, and that each bottle is tested to more than double the charging pressure.

ANNOTATIONS.

WE have been requested by the Hon. Secretary of the Association, Mr. Morton Smale, to state that it would greatly facilitate the arrangements for the ensuing Annual Meeting, if those gentlemen who propose to contribute papers would speedily announce their intentions to him. There cannot surely be any dearth of volunteers, and we do sincerely hope that promises will soon begin to come in.

OUR readers will see from an abstract which we publish at page 355, that the Royal College of Surgeons have petitioned for power to appoint additional members to the board of examiners for the licentiateship in dental surgery. At present the college is restricted to three examiners; there exists, however, a desire to increase the number, in order to place the dental examination on exactly the same lines as the other examinations conducted by the college. In all the other examinations there are two examiners to each table, one to mark and one to examine, and seeing that it is essential in the eyes of the Association that there should be every possible similarity between the L.D.S. and the other college examinations, we are very glad that the authorities at the college have felt that the anomaly should be removed.

THE questions in the examination on the 8th of this month were as follows: *Anatomy and Physiology*.—1. Describe briefly the air-sinuses of the cranium and face. 2. Give the distribution of the ophthalmic division of the fifth pair of nerves. *Surgery and Pathology*.—3. Give the construction of the temporo-maxillary joint. Describe the symptoms of bilateral dislocation. How is its reduction accomplished? 4. What are the local signs and the pathological changes of inflammation? Give the usual results. *Dental Anatomy and Physiology*.—1. Give examples of teeth which have no enamel, or only a partial investment. What do you know of the enamel-organ in these cases? 2. Describe the microscopic structure of the dental tissue at the level of the neck of a tooth. 3. Define incisors, canines, and premolars. In what respects is the canine of especial value in the human mouth? *Dental Surgery and Pathology*.—1. Explain the mode of formation and character of secondary dentine. What symptoms may

indicate its presence? 2. At what age would you treat protrusion of the front teeth? Give your reasons for the selection of the period, and the plans of treatment in ordinary use. 3. What are the principal defects in amalgams? What special properties are believed to be conferred upon them by the presence (i) of copper, (ii) of platinum, (iii) of gold?

ON the 8th, 10th, and 13th of this month, Mr. Christopher Heath (Hunterian Professor) delivered at the Royal College of Surgeons, a series of lectures on "Certain diseases of the jaws," each lecture commencing at 4 p.m. The first lecture was devoted to "Cystic diseases of the jaws," the second to "Tumours of the jaws," and the third to "Diseases of the temporo-maxillary joint and closure." Members of the dental profession and students were specially invited, and we hope to give an abstract of the lectures in a future number for the benefit of such of our readers as were unable to attend.

THE Irish College are taking very decided steps to prevent their licentiates from disgracing the diploma by derogatory practises. The undertaking which is signed by every licentiate at the time of receiving his diploma contains the following words:—"I shall not attract business by advertising or any other unbecoming practise, and I agree that such diploma shall be cancelled on it being proved that I have done so." The Council of the college having discovered that this declaration had been violated by several licentiates required of the offenders to withdraw their advertisements and to give an unqualified pledge to observe strictly their obligation to the college on pain of forfeiting their diplomas, and having their qualifications from the college erased from the Medical Register. An apology and a renewal of the undertaking having been tendered by all these offenders, were accepted by the Council on the understanding that any future offence would be punished by withdrawal of the diplomas. The Irish College is to be congratulated upon the firmness it has displayed in this matter.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Fellows on Monday last, the following office-bearers were elected for the ensuing year:—President: Anthony H. Corley.

Vice president : Henry Fitzgibbon. Secretary : William Colles. Council : G. F. Kidd, William Colles, Sir Charles Cameron, Edward Hamilton, Robert McDonnell, Sir William Stokes, William J. Wheeler, Sir George Porter, J. Kellock Barton, E. H. Bennett, Philip Crampton Smyly, W. Stoker, Rawdon Macnamara, A. Meldon, William Elliott, William Carte, Samuel Chaplin, William Frazer, and Kendal Franks.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—During the April sittings of the examiners, the following gentlemen passed the first professional examination for the licence in Dental Surgery :—John Price Roberts, Liverpool ; John William Daniels, Cheshire ; Frederick Page, Edinburgh ; John Turner, Edinburgh ; Herbert Bycroft Eyard, Bath ; and the following gentlemen passed the final examination and were admitted L.D.S. Edinburgh :—Peter Sidney Spokes, Reading ; Alfred Stevens, London ; David Thomson, Edinburgh ; John Gardiner Fraser, Caithness.

THE title of the paper announced to be read by Professor Victor Horsley at the meeting of the Odontological Society on the 7th inst., did not sound particularly attractive, yet it brought together a full attendance of members, and it is needless to add that those who came were not disappointed of their expectations. The title given on the Agenda was in fact rather misleading, for instead of a commentary on “ A Case of Epileptiform Neuralgia,” Mr. Horsley, after giving a short account of three cases which he had treated successfully, two of the patients being present, devoted the greater part of his paper to a description of the pathology, diagnosis and treatment of this terribly painful and hitherto intractable disease.

PERHAPS the most valuable part of the paper from the dental practitioner's point of view was Mr. Horsley's attempt to establish a differential diagnosis between Epileptiform Neuralgia due to neuritis, or to some irritation affecting the trunk of the nerve, and that due to dental irritation. Hitherto, he remarked, it had been only after all his teeth had been extracted, after much unnecessary suffering had been endured, and much time had been lost that the patient was at last operated on in such a way as to

give him complete relief. Was it not possible to diagnose these cases at an earlier stage, and thus both shorten the patient's sufferings and prevent the useless sacrifice of sound teeth? Mr. Horsley thought that it was, at all events in some cases, and he pointed out several indications by which neuralgia of central could be distinguished from that of peripheral origin.

As regards treatment Mr. Horsley thought that experience had shown that nerve stretching, as regards the fifth nerve, was not a satisfactory operation. It was not free from risk and the relief afforded was never other than temporary. The only really successful treatment was to remove a considerable portion of the trunk of the nerve as near to its exit from the skull as possible, and with antiseptic precautions this was a comparatively easy operation. We regret that we are unable to give an abstract of this very interesting paper in our present issue. We shall, of course, publish a tolerably full report of the meeting in our next.

DENTAL STUDENTS' SOCIETY—NATIONAL DENTAL HOSPITAL. Extraordinary meeting held Friday, June 3rd, Mr. Henri Weiss in the chair. The rules to regulate the use of the Library were then considered and finally approved. The business of the ordinary meeting was then proceeded with, and the librarian acknowledged the receipt of several volumes of medical periodicals, the gift of Mr. Sydney Spokes, and Dr. St. George Elliott. Mr. Gaddes then exhibited a fine example of the bony pike, of South America, and was good enough to present it to the Society. Mr. Stocken presented an upper wisdom tooth with two enamel nodules, and Mr. Humby a very fine specimen of an odontome radicaire, attached to an upper lateral incisor, presenting a fan shaped expansion and measuring over half an inch from side to side. Mr. Fripp mentioned a case in which brain fever had followed a painful attack of alveolar abscess. Mr. Spokes, M.R.C.S., then read a paper entitled "Some aspects of Dental Surgery" in which he gave a history of dental surgery as a profession, and its relation to general surgery. After a prolonged discussion, the President declared the meeting adjourned until Friday, October 14th.

THE annual distribution of prizes to the successful students of

the National Dental Hospital took place on Wednesday evening, June 8th, at the Freemasons' Tavern, Great Queen Street. The occasion presented the novelty of being associated with a Cinderella Dance. At 9.30 Mr. Thomas Arnold Rogers received the visitors in a room adjoining the ball-room and delivered an address couched in kind and encouraging words, and Mr. Samuel Lee Rymer acknowledged the honour Mr. Rogers has done the Institution by proposing a hearty vote of thanks, which was carried by acclamation. Dancing was resumed until midnight, and among the 120 present, were Mr. and Mrs. Charles Tomes, Miss Rogers, and Dr. Cunningham.

It will be seen from our report (page 358) that our affairs have happily occupied but a small portion of the valuable time of the Medical Council at its recent session. Whatever may be the value of the collective deliberations of this body to the profession and the public, we cannot but think that the time expended by Dr. Haughton on behalf of the Dentists' Register was anything but absolute waste. Clearly, the speaker must have felt that something must be done to silence the growing reproach that the truly golden moments of the meetings was not always productive of tangible benefit to the profession, and he determined to show that the Council could if it chose spend its time most wisely and judiciously.

At a recent meeting of the Pathological Society, Mr. Bland Sutton brought forward an interesting communication on rickets in animals. The lions in the London collections suffered, while those in Manchester and Dublin enjoyed immunity. In the course of the discussion Sir James Paget suggested that the experiment of giving bones to ricketty lions in Dublin, had been followed by a disappearance of the disease. Mr. Sutton explained that the rickets had been attributed to the exclusive use of horse-flesh, but the use of goats'-flesh with the bones had not caused the disappearance of the disease. Feeding the lions on bones had prevented the cubs being born with cleft palate, but had not prevented the development of rickets.

MR. CLUTTON has recorded two successful cases of operation for cleft palate in children of twelve months of age, at the Victoria

Hospital for children. He points out the importance, if the voice is to obtain its natural sound, of performing the operation as early as possible. If, however, it fails, it renders a subsequent operation more difficult, and for this reason only the simplest cases should be undertaken so early. Even in healthy children it is important that there should be an abundance of tissue on either side of the cleft so as to afford a thick bond of union. Much of the success of these early cases depends upon the subsequent nursing and care.

THE Post Graduate classes in connection with the Edinburgh Medical School are to be continued this year. Demonstrations, &c., in connection with this course, will be given in the Edinburgh Dental Hospital, 30, Chambers Street, during the last week of September and the first week of October. Medical Practitioners and Dental Surgeons are invited to attend these clinics.

THE Royal College of Surgeons of Edinburgh have resolved to close the examinations for the L.D.S. since curriculo in October, 1888. This will complete a period of ten years' grace, during which all registered dentists were eligible for examination.

It is expected that the Glasgow College will follow the initiative taken by the Edinburgh R.C.S.

IN the meantime, those desiring to possess the L.D.S. of Edinburgh, will require to make haste with their studies and present themselves for examination before the close of 1888.

THE Edinburgh directory shows little change this year in regard to the number of registered dentists practising in that city. Three names have disappeared from the list, but two new ones have been added, the present number is forty-four.

THE name of James A. Jones, L.D.S.Glas., Barrack House, Broad Street, Hanley, has been placed by the Lord Chancellor on the Commission of the Peace, for the Borough of Hanley.

ON Friday the 3rd and Saturday the 4th of this month, Sir

Edwin Saunders entertained the members of the Representative Board at dinner, at 13A, George street, Hanover Square.

A BAZAAR recently held in aid of the funds of King's College Hospital, has resulted in a net profit of nearly £1,200.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

Fees to Medical Men.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I am the correspondent who asked you to ventilate this important question, and regret that some of your letters on the subject treat the matter as one of "reciprocity." I take exception to this, and would like to see the matter decided on the lines laid down by "A Dental Surgeon" in this Journal, viz., are we members of the medical profession? for it is on this status I attend medical men, and expect to be attended by them.

Some of your correspondents think I have been "exceptionally unfortunate." Permit me to explain. On receiving my account from my medical man, an F.R.C.S., I enclosed a cheque and asked for "some information as to medical etiquette," &c., and received in reply, "Thanks for cheque. I think you are under some misapprehension in the matter of fees. I attended Mr.——* for years, and always charged him, and he in return charged me. I have made enquiries and find this is the usual custom." Feeling this was not correct, I enquired in a friendly way of one of the leading surgeons in the county, and in reply received, "There is no prescribed law that I know of touching your question; for my part, I always give the dentist his fee, and, I believe, am charged in accordance with his usual scale. On the other hand, I expect fees from dentists and obtain them."

I sent the Journal to the *Lancet*, and requested their opinion, and on April 30th the editor endorses what you laid down, but adds, "We have, however, always maintained that dentists should hold a *surgical* as well as dental qualification, when the question need not have been raised."

Am I to understand our L.D.S. diploma is *not* a surgical one; if so what value is it? After years of patient study and expense, it is rather cruel for a dental student to find the L.D.S. is not the right qualification after all.

Yours truly, M.

* A Dentist, and L.D.S.

Doctors of Dental Surgery.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—I have been both amused and interested on reading the letters of your several correspondents regarding the title of doctor being given to dentists, or the latter prefixing doctor before their names.

As a Colonial dentist, in sympathy with the great body of American dentists, I cannot understand why the British dentists and medical men in general object to the word doctor being applied to members of the dental profession.

Let us see what the word doctor actually means, for one would think—if certain persons were permitted to have their way—that only members of the healing art (surgery and medical) were entitled to be styled doctors, or allowed to prefix the letters Dr. before their names. Doctor simply signifies learned in some particular art or science, *e.g.*, philosophy, law, theology, divinity, philology, music, medicine, and lastly, dentistry. Now it is only in America (U.S.A.) that the degree of Doctor of Dental Surgery (D.D.S.) and Doctor of Dental Medicine (D.D.M.), is given, the former since 1845—by, I think, the Baltimore College of Dental Surgery, and the latter of comparatively recent date by the Michigan and Harvard Universities, and *recognised by the General Medical Council of England*. The science of modern dentistry has now reached such a state of perfection that any one who has honestly and faithfully taken the degree of D.D.S. or D.D.M., should not be begrudged the use of the word doctor (learned) when it is publicly known that it is in connection with the science of dentistry. The British curriculum for the L.D.S. is quite as stringent, and equally as good, to my mind, as the D.D.S., consequently equivalent to it (D.D.S.), therefore why not get the English colleges to make a new departure and confer the degree of Doctor of Dentistry, so as to be even with their transatlantic brethren. It does not follow because a person is doctor of dentistry that he can construct a better set of artificial teeth, or perform better operations in general than a good *bona fide* dentist, but when it comes to *theory*, the dental doctor might know a little more. English dentists will always be haggling about American degrees (titles) unless something is done to legalise the title of Doctor of Dentistry in the United Kingdom, and why should it not be so?

I am, &c., L.D.S. and D.D.S.

P.S.—I would like to add that unless the members of the dental profession take an independent stand and establish a chartered college, where the title of Doctor of Dentistry—which would include every branch of the art—could be conferred, I fear it will be many generations before the present difference between English and American titles is settled. The Royal College of Surgeons and the

College of Physicians are two separate and distinct bodies ; this being the case, why should there not be a Dental College, where the degree of Doctor of Dentistry was conferred ?

Tiffine.

TO THE EDITOR OF THE " JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Could you, or any of your numerous readers, give me any information respecting a fluid for extracting teeth, named *Tiffine*, sold by Dr. F. C. M. Baldwin, of Ohio ? (It can be procured from Mr. J. E. Boore, 27, Upper Bedford Place, London.)

Yours, &c., INQUIRER.

[Our correspondent probably desires information concerning the nature and uses of the drug.—ED. J.B.D.A.]

APPOINTMENTS.

H. R. F. BROOKS, L.D.S.Ire., to be Dental Surgeon to the Horton Infirmary, Banbury, *vice* R. Heygate Brooks, resigned.

GEORGE HOLT, L.D.S.I., has been appointed Honorary Dental Surgeon to the Walmerely Branch (Bury) of the Northern Counties Hospital for Incurables.

LEONARD MATHESON, L.D.S.Eng., has been appointed Dental Surgeon to the Hospital for Diseases of the Throat, Golden Square.

Mr. DENISON PEDLEY, L.D.S., M.R.C.S.Eng., has been appointed Assistant Dental Surgeon to the National Dental Hospital, Great Portland Street, W.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their subscriptions were due in JANUARY last, and are requested either to remit them direct to the Treasurer, at 40, Leicester Square, or if more convenient, to pay them through their bankers, or through the agency of one of the Dental Depots, and so save unnecessary postage, &c., in applying for the same.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

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VOL. VIII.

1837 to 1887—A Retrospect.

HE must be a bold man indeed who can set himself to the task of a careful examination of all his actions for the past fifty years without a sense of misgiving, unless his conscience be very clear or very fast asleep. Yet occasions arise from time to time when some such self-examination becomes unavoidable, and this year of grace, 1887, memorable in so many ways, has been the signal for a general stock-taking on the part of associations and corporate bodies throughout the kingdom. All sorts and conditions of men in Great Britain have been taking a look back to 1837 to see in what kind of condition they were then, how they have fared since, and whether the progress of the half century has been more or less than might have been expected. We cannot refrain from the temptation to recall

for a moment our own history as a profession during this period, and we may say without fear of contradiction, it is a history to be very proud of. The profession of dentistry has during this half century been born and passed successfully through the diseases of infancy (though the doctors may have looked grave and shaken their heads at times), its schoolboy days were not without a few fights, but work was done, lessons—sometimes very hard ones—were learnt, and in due course of time the headstrong and infatuous youth has become a sober and respectable citizen, and has settled down to earn his daily bread, as highly respected as any of the dignified professions, who are now his fellow-workers and friendly colleagues.

In 1837 there was no dental profession at all. There were a few scientific and honourable gentlemen who carried on the practice of our speciality on strictly professional lines ; there were also a number of men who made the name of dentist a cover for imposing upon and robbing the ever credulous public, and by their shameless advertising and quackery caused the very name of dentist to be almost a reproach, and for many years after organisation had taken the place of chaos an unpleasant flavour clung to the word. Those who would learn from what a sea of mud the dental profession originally emerged must spend a pleasant and instructive hour or two over the pages of Mr. Alfred Hill's delightful little book on the History of Dental Reform. What will a student who has just taken his L.D.S. degree think of the mode of practice that enabled a chemist to earn £200 a year by drawing teeth at 1s. each, 4000 teeth "removed by one man in one town" annually? No wonder caries was rarer in bygone times, we only wonder teeth were not rarer altogether. Our readers have, however, so often heard the story of those early days of darkness from the lips of those who helped to create the profession

out of these unpromising materials, that we shall pass on to note a few of the steps by which we came to find ourselves in 1887 a large and important branch of surgery recognised and protected by Act of Parliament; qualified by a diploma which is as complete a proof of practical and scientific fitness to practise as any speciality or profession can boast of (and we are inclined to add that the education and examination of a modern dental licentiate is one of the most complete and thorough preparations and tests of fitness existing); possessed of many excellent educational centres, many learned societies devoted to science, a large and increasing political organisation with many branches, and a representative periodical literature. The question is how all this was brought about, and those who inherit these privileges should never be allowed to forget the old struggles and sacrifices by which their present peace and prosperity were secured.

The first hint at a desire for better things that we are able to recall, was a pamphlet issued in 1841, by Mr. George Waite, of Old Burlington Street, calling the attention of Parliament, the profession, and the public, to the disgraceful condition of dental surgery. This pamphlet advocated a curriculum and a qualifying examination by the College of Surgeons, and deprecated the "narrow selfishness" that led dentists to hide their knowledge from each other lest it should be pirated, and to depreciate their fellows for their own mean ends. Mr. Waite's appeal was too far in advance of the times; many years later almost every word of his prayer was granted, but for the time it died of neglect. In 1843, Sir James Graham's Medical Bill suggested to a few minds the advisability of an endeavour to advance the claims of dentists to be recognised in the measure; and at the house of Mr. Arnold Rogers, on March the 4th, 1843, there met together seven gentlemen to commence the

long battle of dental reform. John Tomes and Edwin Saunders were then little dreaming of future knighthoods, and perhaps hardly suspected the huge revolution in which they were destined to play a conspicuous part, also Arnold Rogers and John Parkinson. These were soon joined by others, including Messrs. Cartwright, Bigg, and Harrison, and the College of Surgeons and Parliament were memorialised to consider the question of dental education and reform, and after some struggles, this first attempt to start the reform-question was reluctantly abandoned. Mr. Tomes' restless energy now attacked the question from another point of view, namely, that of pure science, and he delivered a carefully prepared course of lectures at Middlesex Hospital, which were subsequently embodied into the now familiar manual, and from that time to the present day, Mr. Tomes took a foremost part in the battle of dental reform.

In 1855, Mr. Rymer wrote a letter to the *Lancet* suggesting a College of Dental Surgery. Mr. Rymer soon showed an energy and ability that were not long without a following. He reiterated his views in the *British Journal of Dental Science*; meetings were convened, and the movement rapidly assumed importance. From these meetings sprang the College of Dentists, and the principles its members sought to promote were of an independent nature, and did not involve a connection with the College of Surgeons. In the year 1856, under the auspices of those members of the profession who deemed this connection to be highly important, the Odontological Society was founded. The antagonism between these two bodies raged for some time; both had strong and eager defenders, both of course made mistakes—*humanum est errare*—of which their opponents naturally made the most. The story of that long discussion is interesting reading, but the bygone battle is too long for narration here. Both bodies

produced good scientific work, as well as hard controversial fighting.

In the August of 1857, however, through the instrumentality of Mr. Robert Reid, of Edinburgh, a meeting was arranged privately between two of the leading men on either side, Mr. Tomes for the Society, and Mr. Underwood for the College. The result of a friendly conversation was to show that there really was no great occasion for fighting, and no reason why two bodies of men so thoroughly in earnest, and so determined to benefit their profession, should not amalgamate and work together. The two gentlemen were officially appointed delegates, together with Messrs. Robinson and Hepburn for the College, and Messrs. Rogers and Cartwright, jun., for the Society, and a scheme of fusion was drawn up, which was cordially accepted by the Society, but rejected by the College. The ultimate result of this was the secession after some time of the president, and many of the council and office bearers of the latter body to the former.

The next great event in our history was the formation by the Odontological Society of the Dental Hospital of London, and the School of Dental Surgery in 1858, and from this great step the progress of reform, founded upon the broad basis of education, rapidly proceeded. The first home of the institution was 32, Soho Square, and its first dental surgeons, Messrs. Harrison, Cartwright, Tomes, Hepburn, Underwood, and Charles Rogers. This was thirty years ago, and it is interesting to note that the sons of three are on the present staff, Mr. David Hepburn, Mr. Claude Rogers, and Mr. Arthur Underwood, and that Mr. Charles Tomes has only recently ceased to be so.

A scheme of education was drawn up and the College again approached about a diploma. Some few short-sighted spirits fought against the curriculum, but in the end wiser

councils prevailed ; Mr. Rymer and the rest of the College of Dentists effected the long sought fusion of that body with the Odontological Society. In 1860 the College of Surgeons opened its doors and instituted the L.D.S. examination. The fierce opposition of the medical press died out in time, as foolish and stiff-necked opposition to healthy progress generally does die out ; the united and now almost unanimous action of the profession moved slowly but surely onwards. In due time the hospital outgrew its first home, and owing very largely to the liberality of Mr. Saunders, was finally located in its present more commodious quarters. The profession in Scotland meanwhile endeavoured to form a Representative Society, the initiative being taken by Dr. Smith. This project, too, had its early struggles, the old quarrels about qualifications nearly proving fatal to the infant scheme. In 1867, two years after the failure of a first effort, Mr. David Hepburn, of Edinburgh, inaugurated another attempt to unite his *confrères* into a learned society, his efforts were crowned with success, and the now famous Odonto-Chirurgical Society was the result. In the meantime the energy of the London men had found expression in another hospital and school, the National Dental, which subsequently became a flourishing institution under the able management of Mr. Oakley Coles.

A few years later the desire for something more than the existing organisation came to be widely felt among us. Those who had led our earlier struggles for reform, aided by a younger generation of energetic and able recruits, set about the last great reform that was destined to establish our position for ever, namely, the protection of a Register. The Dental Reform Association was formed, and it had not existed long before, at the earnest solicitation of his fellow practitioners, Mr. Tomes, notwithstanding

failing health, again took the lead of the movement as President of the Association. Mr. T. Underwood supported him as Vice-President, Mr. Parkinson as Treasurer while a new name was added that will always be associated with this phase of reform in Mr. J. Smith Turner, who threw all his indefatigable energy into the heavy work of the affair as Hon. Secretary. The story of the passing of the Dentists Act, and the subsequent formation in 1879-80 of the British Dental Association, is fresh in the minds of all of us. The end was now gained, we had passed through many trials, and had learnt many lessons, but we had successively gained scientific status, a curriculum, a diploma, an honourable place among the branches of surgery, a Register, and lastly, an organised political representative body.

Here we may leave the story of our growth with apologies to our readers for the necessarily imperfect telling. To the older ones among us many familiar incidents and long lost faces may be recalled; to the younger some ambition to be worthy of the past may be stirred up. The lessons of the eventful fifty years are many, but if there is one more than another that stands out pre-eminently as a warning and a guide it is that unity is strength, that enemies are possible friends, and if opponents are energetic and able all the more reason for converting them to your own side rather than driving them to desperation. The worst evil that could befall us now would be that some unlucky cause of dissension, some ill-omened war cry should be raised to divide us once more into rival camps. In view of such a danger, let us remember that what the Odontological Society and the College of Dentists failed to accomplish, while their ability was engaged in antagonising each other, their united efforts soon attained; that the position that we sought

in vain as an isolated body speedily became ours when we became an integral part of the medical profession. The Register that embraced such heterogenous elements has dragged many upwards and none downwards, and the last great fusion into an association which is rapidly involving the whole profession in one great organisation, has enabled the interests of our calling to receive public attention in all quarters.

We cannot close this notice without one word of tribute to those veterans who have borne the heat and brunt of the day. It is a happy thing for us that so many of them have been spared to see the battle fought and won, and know that others are reaping the fruits of their labours; let those then, upon whom their mantle falls, lay to heart the fact that we owe these great results not only to the pertinacity, ability, and foresight of the pioneers of dental reform, but, perhaps, even more to their tact, unselfishness, and forbearance.

Next month we hope to say a few words about the scientific achievements of the Victorian era of dentistry.

ASSOCIATION INTELLIGENCE.

The Annual General Meeting.

THE Annual General Meeting of the Association will be held in the Hall of the Faculty of Physicians and Surgeons, 242, St. Vincent Street, Glasgow, on Thursday, Friday, and Saturday, August 18th, 19th, and 20th, 1887.

The following will be the order of proceedings :—

Thursday, August 18th.

9 a.m.—Meeting of the Representative Board in the Library of the Faculty of Physicians and Surgeons.

10.30 a.m.—The Annual General Meeting for business (open to members only) will assemble in the Hall of the Faculty of Physicians and Surgeons. At the termination of the Association business the meeting will be open to visitors. J. R. Brownlie,

Esq., L.D.S.Eng., will then take the chair and deliver his address. Papers will then be read and discussed.

Casual Communications will be received after the Papers, should time permit.

1 p.m.—Adjournment for Luncheon.

2.30 p.m.—Reading and Discussion of Papers.

5.30 p.m.—Adjournment.

8.30 p.m.—The President and Mrs. Brownlie will receive the Members of the Association and their friends at the St. Andrew's Hall, Berkeley Street, Glasgow. Music.

Friday, August 19th.

10 a.m.—The Annual Meeting of the Dental Benevolent Fund.

11 a.m.—The Reading and Discussion of Papers will be continued.

1 p.m.—Adjournment for Luncheon.

2.30 p.m.—Demonstrations and Exhibition of Instruments, &c., in the Dental Hospital of Glasgow, George Square.

6.30—The Annual Dinner of the Association will take place at the Grand Hotel, Charing Cross, Glasgow.

Saturday, August 20th.

A special train will leave Queen Street for Dumbarton at about 9.30, conveying those who wish to visit the shipbuilding yard of the Messrs. Denny, one of the most complete on the Clyde. After viewing the works, the members of the Association and their friends will become the guests of the West of Scotland Branch on board the saloon steamer, "Shandon." The steamer will visit some of the best of the Loch scenery on the Clyde, and luncheon will be provided on board. The return journey will be timed so as to enable members to catch the evening trains, south and north. Railway tickets, return, first-class, 1s. 7d.

The above arrangements may have to be altered according to the time at the disposal of the Committee.

SPECIAL NOTICES.

No reduction can be made in railway fares.

If those Members of the Association who are going can arrange to leave London by the train leaving Euston at 10.10 a.m., on Wednesday, 17th August, and can send their names to the Hon. Secretary, stating class they intend to travel, carriages, &c., can be secured for them.

The price of the Ticket for the Annual Dinner is One Guinea, which includes wine.

All Members attending the Meeting are requested to sign their names in the book provided for that purpose.

Subscribers to the Benevolent Fund are earnestly requested to attend the Annual Meeting.

MORTON SMALE, M.R.C.S., L.M., L.D.S.Eng.

Honorary Secretary.

The principal Hotels in Glasgow are the "St. Enoch" (Midland), and "Central Station" (London and North Western); the "Grand," at Charing Cross; the "George," in George Square; the "Bath" and the "Alexandra," in Bath Street (close to the Faculty Hall); the "Cockburn" and the "Waverley" (Temperance Hotels).

Eastern Counties Branch.

THE Annual Meeting of the Eastern Counties Branch was held on Tuesday, July 5th, at Bury St. Edmunds, Mr. H. W. Tracy, of that town being the President for the coming year. There were also present, R. W. White, the retiring President, B. W. Harcourt, F. H. White and A. L. Littleboy, of Norwich; J. Fenn Cole, N. Tracy, and H. R. Eyre, of Ipswich; F. Hall, Hertford; S. A. T. Coxon, Wisbech; S. Dearle, Diss; Alex. Kirby, Bedford; R. Payling, Peterborough; Dr. Cunningham and W. A. Rhodes, Cambridge.

The Secretary read his report as follows:—

"During the past year three new members have been elected, one has died, and one name has been removed from the list of our members for non-payment of subscription.

"Your Council have not, during the past year, had brought to their notice any cases of persons whose names do not appear on the Dentists' Register, yet who practise as dentists, and who attract patients by extravagantly and cunningly worded advertisements which, by their ingenuity of construction, place the advertiser without the pale of the law.

"A matter for congratulation has been the appointment of two dental surgeons at Addenbrooke's Hospital, Cambridge.

"It will be remembered that at the annual meeting in 1883, Dr. Cunningham proposed a resolution, which was carried, and ran

thus :—‘That this Association is of opinion that in the interests of the public and for the efficiency of medical charitable institutions, it is expedient that a qualified dental surgeon should be attached to all general hospitals and dispensaries.’ This resolution was sent to the authorities of all hospitals and dispensaries in the district. No acknowledgment was received from Addenbrooke’s. Yet, nevertheless, the influence of that resolution must have asserted itself, as has been proved by subsequent events. It is to be trusted that the example of Cambridge will be followed by other large towns in the Eastern Counties.”

The next meeting was unanimously fixed to be held at Northampton, with Mr. F. Hall (Hertford), as President for the year then ensuing. Mr. Harcourt, Mr. Fenn Cole and Mr. N. Tracy, were the retiring members of the Council, and the first two were re-appointed with the late Treasurer (Mr. John Bridgman), in the room of Mr. Tracy, who did not wish for re-election.

On the motion of Mr. FENN COLE, seconded by Mr. N. TRACY, Mr. Rhodes was re-appointed Hon. Sec., and after thanking the meeting for having done him the honour, Mr. RHODES appealed to the members to be ready to make some sacrifice so as to ensure a good meeting at Northampton next year ; Northampton being a place where, if anywhere, the Association should make its influence felt.

On the motion of Mr. HARCOURT, Mr. Henry White was elected Treasurer in the place of Mr. Bridgman, who retired from that office.

The retiring PRESIDENT then said he would not detain them long, but he had one or two words to say. First, there was a communication from Dr. Waite, of Liverpool, in which he blamed them very much as a Branch, and he believed the Association generally, for negligence in two principal matters. He complained that they did not interest themselves sufficiently with regard to their neighbours ; that they did not make themselves cognizant of those about them who were eligible to join them and ought to do so, nor report those who might be breaking the written or unwritten laws of the Association. Believing there was a considerable amount of justice in Mr. Waite’s remarks, he felt at the same time that everyone’s business was no-one’s business. He would therefore, only urge upon them one and all, the necessity of looking to these important points. Dr. Waite also called atten-

tion in his letter to the fact that names of some gentlemen appeared as members of the Branch who were dead. If the Association and its records were to be of use, they should be correct, and certainly dead men's names could not stand for much.

Looking round at the present meeting, he regretted that it was not larger. It was larger than the Lincoln meeting, but knowing Bury St. Edmunds to be more centrally situated, he had anticipated a better attendance. As the Branch had so few members, it was to be regretted that they did not all strive to be present. Considering the time the Branch had been in existence, the membership really seemed very small. He believed he was right in saying, that though not the youngest Branch this was the smallest. There were only two papers, he believed, prepared for the present meeting ; but it seemed absurd to travel many miles for two papers, when they had plenty of time for more ; and that if more objects of interest were brought before them, more good would be done. At Lincoln, small though their meeting was, they had some interesting papers, and those who were not there to hear them lost a good deal. The paper, by Mr. Fisher, on "The Compulsory Attention to the Teeth of School Children," was most ably brought before them by Dr. Cunningham, and those who read the journals would see that it provoked a most excellent discussion. There was also a short communication from Mr. Howarth, who showed an ingenious articulator, which was to his mind, a splendid though simple arrangement, and he only regretted that a year had elapsed without its being given in some way to their Society. The Secretary had told them that one member had been struck off their list, one had died, and three new names having been added, they were richer by one. The pleasing task of introducing the new President only remained to him. No one would doubt that the business of the Branch would be ably presided over by Mr. Tracy. In vacating the chair, he thanked the members for the kindness shown to him in the last two years, and for the support he had received, not only from the members of the Council, but of the Branch generally.

In moving a vote of thanks to the retiring President, Dr. CUNNINGHAM drew attention to the fact that his services had been retained for two years. Mr. Hall seconded the vote of thanks, which was passed with applause, after which Mr. H. W. Tracy took the presidential chair vacated by Mr. White, and at once

invited the members to luncheon at the "Angel Hotel," where they were joined by the following local gentlemen: Dr. Macnab, Dr. Image, Mr. John Kilner, Mr. F. Winter Clarke, Mr. C. S. Kilner, Dr. Boulton and Mr. J. R. Thompson.

After luncheon, which was elegantly served in the Masonic Room, Mr. R. W. WHITE moved a hearty vote of thanks to Mr. Tracy for his hospitality. Those who, like himself, had enjoyed Mr. Tracy's acquaintance for many years, would, he was sure, wish him every success, not only as President of the Eastern Counties Branch of the British Dental Association, but also in the profession in which he works.

THE AFTERNOON MEETING.

The PRESIDENT opened the proceedings with an interesting paper on Bridgework, at the close of which he invited any remarks on it, upon which Dr. Cunningham said it showed great magnanimity on the President's part to suggest that they should discuss his paper. He thanked him for the innovation, but thought they had better decline the invitation, though 'if his brother brought forward the specimens later it might afford an opening to gentlemen who might like to discuss the large question of Bridgework. The President had managed in the minimum of time to attain the maximum of possible debate, and at some future time they might hope to meet him in a freer field of discussion than where he had the advantage of the reserve of the presidential chair. He thanked him for his paper and wished before the meeting went further to introduce a motion, which would, he thought, recommend itself. His reasons for it might be found in the presidential address of Sir Edwin Saunders, at the general meeting of the British Dental Association of last year. In making what might be called a jubilee retrospect, and contrasting former things with present, Sir Edwin said no hospital or infirmary could be considered complete in these days without having a dental surgeon attached to it. If the speaker had known the state of affairs existing yet in the provinces, he would hardly have felt himself justified in the remark, and he (Dr. Cunningham) took occasion to allude to it at the same meeting. No doubt he expressed the feeling of the members of this Branch—certainly of the other Branches and of the parent society—when he said that Sir Edwin's statement, if not true, ought to be true. It lay a great deal in their own hands to say whether they would

make it true or not. On the 11th of April, 1883, a resolution was brought before this Association (it was not a Branch then) as follows :—

“That this Association is of opinion that in the interests of the public, and for the efficiency of medical charitable institutions, it is expedient that a qualified dental surgeon should be attached to the medical staff of all general hospitals and dispensaries.” 11th April, 1883.

That resolution, Dr. Cunningham said, was proposed by himself, and carried unanimously. The only amendment he would wish to make in it now, would be that instead of one dental surgeon, two, three, or more, according to circumstances, should be attached to each institution of the kind, because it was a well-known fact that the amount of good which a surgeon could do in a quarter-of-an-hour, it would take a dental surgeon about an hour to achieve. As the then hon. sec. of the Association he had to see to the carrying out of his own resolution. In 1884 he had to report very unfavourably on it. The Bedford Infirmary and the little hospital at Wisbech had been far ahead of larger institutions in this respect, but appointments had since been made at Addenbrooke's Hospital, Cambridge. When this branch discussed the matter at Cambridge, they were pretty well unanimous that it was useless to appoint one man only, and they scorned the idea of any jealousy existing between fellow practitioners in the same town. Standing before the present meeting as a defeated candidate for one of these appointments, he had the greater pleasure in asking them to carry on the good work. In Norwich, with its many excellent institutions, what was there of a dental nature that would be a credit to the practitioners of such a town, or to the members of this Association. Through the ventilation of the subject in Cambridge, they had been able to make great reforms. Two dental surgeons were appointed at Addenbrooke's, and—owing principally to Professor McAlister's remarks at their dinner—a lectureship was founded in the Medical School, which he hoped would be established on a permanent basis. To make the resolution of 1883 more of an actuality, Dr. Cunningham moved, in conclusion :—

“That, in each town in this district where no dental appointments exist in connection with the medical charitable institutions, the members of this Branch in such town or towns be requested to take united action in bringing

pressure to bear on the proper authorities with a view of giving effect to the resolution of this Branch, then the Eastern Counties Dental Association, passed on 11th April, 1883."

Mr. R. W. WHITE moved a direct negative. The resolution which Dr. Cunningham said was carried unanimously in 1883, was carried by a majority.

Dr. CUNNINGHAM: I apologize. I understood from the journals that it was unanimous.

Mr. WHITE said it was carried by a small majority. He was personally attacked, living as he had done in Norwich for some years, and his father for many years. Nothing dental except extractions had ever been done at the Norwich hospital, nor did he think it would be right towards the lesser practitioners of the town, that anything else should be done. He felt strongly that mechanical work and stoppings ought not to be undertaken at the hospital. He had done all he could, and should do all he could, to prevent such appointments at Norwich, as Dr. Cunningham wished for.

Dr. CUNNINGHAM said he mentioned Norwich, but his remarks had nothing of a personal nature about them.

Mr. WHITE was obliged to Dr. Cunningham for saying so. He did not hesitate to say that with a little trouble he could get a dental surgeon appointed at Norwich, but there would not be one if he could help it. To speak more generally, he would take such a small town as Bury St. Edmunds. It would be rather hard in a town only represented by one dentist, for him to have to do all the operating at the hospital. Being himself a surgeon, he knew his earliest instruction in extractions was at the Norwich hospital, and it was so with those generally who were decent operators in the neighbourhood.

Mr. KIRBY thought it a wrong thing to have these appointments for any but dental hospitals.

Mr. COXON held that every poor person had a right to dental as well as medical attention. People might have mouths that were simply filthy, but they must not have anything done to them because the dental surgeon might do nothing but extractions, some of which would put them in a worse position than before. Why should not a hospital be a benevolent institution as regards dentistry as well as general surgery?

Mr. WHITE: Who is to pay the expenses?

Mr. KIRBY: What time are the dental surgeons to have for their own business?

Mr. COXON: Surgeons give their time.

Mr. RHODES strongly supported Dr. Cunningham's motion. He knew from his short experience at Addenbroke's, that there were many patients who would not or could not go to a dentist. Many poor people, too, took their children for advice. As for the question of expense, he believed thirty or forty stoppings had been done at Addenbroke's at a cost of about 3s. 6d. to the hospital in three or four months. They filled up time if they had any by doing some stoppings.

Mr. KIRBY: How many good stoppings can you do in an hour? I maintain that the amount you can do in an hour a week is very little, but you can do useful work in extracting, which the surgeons would not do so well.

Mr. HALL: If you really want to speak the truth, dental surgery should be acknowledged, and there should be one dental surgeon to live on the premises, and devote his whole time to it, and he should be paid handsomely.

Mr. N. TRACY said a surgeon told him it would be a great mistake to press for the appointment of dentists at hospitals, because it would not do them any good, and it would take away from the surgeons the advantage of seeing dental patients, and getting opportunities of doing some work. He (Mr. Tracy) also thought that with a little self-sacrifice many men and women who would go to the hospitals could afford to pay for private dental treatment.

Mr. WHITE said his father and the elder Mr. Bridgman started a dental infirmary in Norwich forty-five years ago, but it gradually fell off, and his father from press of work was glad to give it up. Mr. Bridgman afterwards handed it over to his son, and it fell down to one day a week, and at last died a natural death. While it lasted, it was a common thing for his father's patients to go there—certainly to send their servants, for whom they ought to pay, and their children for whom they could well afford to pay—and actually to demean themselves by putting on rougher apparel so that they might pass muster.

Dr. CUNNINGHAM wished the meeting to consider the responsibility which an adverse vote would carry. It was not a question of benevolence, but of duty. A man who gave an hour of his professional time would not lose but gain by it, morally, if not

financially, and what is more, his profession would gain too. He was addressing men who had made their mark in their profession, but let them think of their younger days. Would they not have liked the opportunity which younger men than themselves now would like, of practice at a hospital? There might be abuses, but there should be some backbone in the profession, and they should exercise a little discretion, and refuse those whom they knew not to be poor enough for legitimate patients. Were there not abuses on the other side? Men with half-a-dozen hospital appointments, who did not go near them, while half-a-dozen other men in the same town would be glad of the opportunity of operating on those patients.

The motion was lost by seven votes to six.

On the motion of Mr. R. W. WHITE, it was agreed that instead of an address from the retiring President, a member should be appointed to give a retrospect at the next annual meeting, of the year's work in connection with the Association and the Branches; and Mr. White himself undertook the duty for next year.

Mr. HARCOURT then read a paper on the Social Advantages of the Association.

Mr. COLE moved a vote of thanks to Mr. Harcourt, which Dr. CUNNINGHAM seconded, and showed a San Francisco photograph of an advertising Australian dentist, drawing a tooth by the light of an electric lamp fixed on the operator's forehead.

The votes of thanks having been carried,

Mr. COXON read a paper on Regulations (see p. 410).

Casts illustrating Mr. Coxon's paper were handed round and examined with interest, and Mr. R. W. White, speaking of the use of vulcanite, said he never used it if he could help it for capping teeth. Capping with gold did not cost very much more, was better for the patient, and less detrimental to the teeth.

Mr. N. TRACY thought he had seen as much mischief from that treatment as from vulcanite.

Dr. CUNNINGHAM said he always used vulcanite. He did not think the black spots caused by the use of piano wire (mentioned in Mr. Coxon's paper) were anything but what could be removed, and the members of the Coffin family agreed that it was not right to say it could not be used without injuring the enamel.

Dr. Cunningham exhibited a double T-plate, but admitted that unless it was very nicely adjusted there was danger of its being swallowed; also a pair of matrix pliers, designed by Mr. Lennox,

of Cambridge; and Mr. Littleboy showed a new reflector, made by Mr. Hayward, a Norwich watchmaker, to go in front of an argand burner.

A vote of thanks to Mr. Coxon for his paper brought the proceedings to a close.

The members re-assembled at 7 p.m., at the "Angel," for the

ANNUAL DINNER,

which was admirably served by Mr. Sabin. The members were joined by Dr. Image, Mr. C. D. Leech, jun., and Mr. J. R. Thompson.

After the Dinner the customary loyal toasts were duly honoured, and the CHAIRMAN then gave "The Army, Navy, and Auxiliary Forces," associating with the toast the name of Capt. Charles Leech, of the Bury St. Edmund's Detachment of the Sixth West Suffolk Rifle Volunteers.

In acknowledging the toast, Capt. LEECH referred with satisfaction to the recent review of volunteers by Her Majesty, and then dwelt at some length on the requirements and claims of the auxiliary forces.

Dr. IMAGE proposed "The British Dental Association and its Eastern Counties Branch," which he said was a very large mouthful, seeing that it comprised nine counties. He understood that at the foundation of the Branch its progenitor, Mr. White, lay down on the floor, spread a map of England out before him, scratched his head and said, "I'll grab as many counties as I can," and he grabbed nine. Speaking as a medical man, he (Dr. Image) was glad that people were in a state of progress and development. If it were not so, there would be no British Dental Association.

The toast having been drunk with complimentary allusions to "ourselves," Mr. R. W. WHITE in responding, said he was not as Dr. Image had suggested, progenitor of the Branch. That honour belonged to Mr. Stringfield, of Lowestoft, and he was pained to know that Mr. Stringfield was no longer one of their members. Next to him was Dr. Cunningham, and however Dr. Cunningham and himself might squabble, as they did, holding different opinions on most subjects, they were very good friends. Dr. Cunningham had done, perhaps, more good work in connection with the Branch than anyone else, and he wanted

to place his services on record. It was true that when the Branch was formed a species of game of "grab" was going on; one association after another was being formed, and he thought that if he could get nine counties for this one, the Midlands might be left to look after themselves. Unfortunately, the Eastern Counties did not include many big towns, and so the Branch remained the smallest, though not the youngest. They were, however, fairly prosperous. Their expenditure was not large, they did not go in for large finances, but they wanted to look out and see that properly qualified and registered practitioners were added to the Association, as they spring up here and there among the improving towns.

Dr. CUNNINGHAM proposed "The Health of the Medical Profession," an even wider toast, he said, than that of the "British Dental Association," whose members claimed to rank as specialists within the medical profession, but for the moment, in proposing the toast, he was willing to treat them as distinct. Many young men in the dental profession took membership and even the fellowship of the College of Surgeons, and he hoped some would go further and take the M.D. of London, or perhaps after a short time, of Cambridge. Many distinguished ornaments of their Society, were members also of the medical profession, pure and simple. The highest ideal of the dental profession would be, he thought, to be synonymous with the medical profession, but for practical purposes that was not possible. Our Association wanted to make the medical profession and the public understand that they had nothing to do with trade in any way. By drawing these distinctions, they were doing justice to the public as well as to themselves. In Austria, Hungary, and other countries, where he spent a recent holiday, he found them particularly anxious in striving after the ideal he had mentioned—that every dentist should be a medical man. He liked these dinners, at which medical men came amongst them, and he thought it right to be frank and speak out in their presence, because, if they could educate one medical man, they would educate a lot of patients. There should be a scientific education common to the general surgeon and the dental student, the latter departing at a certain period to take up his special studies, but remaining on a par with the former. The Dean of the Middlessex Hospital had said lately, that in future, no medical student could leave that hospital, signed up for the full curriculum, without having passed three

months in the practical dental department of the hospital; and he called on other medical institutions to follow that example. He (Dr. CUNNINGHAM) read a paper before the Parent Society last year, and had been since then in communication with the Director-General of the Army Medical Department, thinking it a crying shame that our soldiers should not have the benefit of as much knowledge as is common to the bulk of our people. The speaker read an extract from an American report to show that his ideas were making way in that country. It was decided at a recent meeting of the American Medical Association to admit to full membership of the Association the graduates of those dental colleges which could show evidence that the requirements as to preliminary and professional education were on a par with that required by the medical colleges, and said a distinguished member of the British Medical Association told him it was only a question of time, allowing fully qualified dental surgeons to become associates if not full members of that body. The feelings of good fellowship indulged in at these annual dinners only needed to be carried a little further in practical life. They had great pleasure in meeting some members of the medical profession in Bury St. Edmunds, and he was glad to be able to associate the toast of a great profession with what was locally a great name—the name of Dr. Image.

Dr. IMAGE in reply, thanked Dr. Cunningham for the kind and proper way in which he had spoken, but at the same time he totally disagreed with him, because he started from the wrong end. The dentists would never become what they wished to be, if they started so. The right thing was to become a member of the medical profession first, and then a specialist in the dental branch. Dr. Cunningham was aiming at an impossibility. He did not think it a right view that dentists should force their way into the medical profession. Let them become medical men first. In conclusion, he said, I must give you my idea. You are a dental branch of the medical profession, and that is the point you should start from. The dental profession is our latest baby, and the gentleman who has proposed the toast of the medical profession, is a baby who has cut his wisdom teeth.

Mr. HARCOURT proposed “the Visitors,” saying it was their pleasure anywhere—at Cambridge especially, where their visitors were numerous—to meet those who did not belong to the Association. He coupled with the toast the name of Mr. J. R.

Thompson, in whom he found a kindred spirit, seeing that Mr. Thompson was an archæologist like himself.

Mr. THOMPSON responded as a townsman, glad to welcome any society for the advance of science or of education; and the toasts of "the Press" and "the Chairman" closed the list, after which several gentlemen enlivened the proceedings by songs and recitations.

ORIGINAL COMMUNICATIONS.

Investigation into Statistics of Diseases of the Tooth-pulp, Periosteum, and Alveolus.*

(From the Record of the Dental Hospital of Budapesth).

By ANTON KOZMA (*Translation*).

MANY authors have, in recent times, carefully investigated hundreds or rather thousands of teeth, with the view of connecting dental caries with special teeth. The investigations of J. Tomes, S. Cartwright, Hitchcock, Magitot, and latterly of Alfred Kay† have, with the exception of the last-named, been universally acknowledged. The researches show such similarity that we need only consider the results given by Magitot and Hitchcock (from 10,000 to 20,000 teeth) in order to render such data useful in a prophylactic sense. If this is true of caries, it is still more true of the inflammatory diseases.

Apart from the question of individual teeth, it is clear from received statistics that acute periostitis is rarer than any other inflammatory disease. Next in order of frequency rank affections of the maxilla, then acute inflammation of the pulp, then chronic periostitis and most frequent of all, chronic inflammation of the pulp. In 1,000 cases of inflammatory diseases the following is the order of frequency.

Acute periodontitis	=	5.2	per cent.
Alveolar affections	=	8.3	"
Acute pulpitis	=	18.1	"
Chronic periodontitis	=	31.0	"
Chronic pulpitis	=	37.4	"

* Communicated to the Journal of the Association by Dr. Arkovy, of Budapesth.

† Ein Beitrag zur Statistik der Zahncaries. Inaugur. Dissert. zur Doctorwürde. Kiel, 1886.

In this table inflammatory diseases are arranged in groups. But it must not be taken for granted that the single forms of diseases occur in like degree, for each group has from one to two varieties which are distinguished by their frequency. Thus chronic parenchymatous pulpitis amounts to 17.3, whilst chronic pulp affections taken collectively amount to 34.7, just as chronic gangrenous pulpitis shows 11.2 against 24.4 of chronic pulp diseases, total gangrene of the pulp 7.5 to 15.0 of chronic pulp affections; again diffuse chronic periodontitis shows 15.9 as against 31.8 of chronic affections of the periosteum, and lastly total necrosis 7.4 to 14.8 of all chronic inflammations of the periosteum.

In the group of acute inflammations of the pulp pulpitis acuta partialis and pulpitis acuta totalis show the highest figures.

Acute pulpitis though standing in the proportion of 10.3 per cent. to the 1,000 cases, figures as 20.6 among acute pulp affections.

Pulpitis acuta totalis figures as 5.3 per cent. of the 1,000 cases, and 7.8 per cent. of pulp diseases.

With regard to the frequency, the diseases stand in the following order:—

1. Pulpitis chron. parenchymatosa. 2. Periodont. chron. diffusa.
3. Pulpit. chron. gangrenosa. 4. Pulpit. acut. partialis.
5. Gangrena pulpae totalis. 6. Necrosis totalis.
7. Pulpit. acuta totalis. 8. Abscessus alveol. chronicus.
9. Necros. apicalis. 10. Periodont. acut. apicalis.
11. Pulpit acuta sceptica, seu superficialis. 12. Periodont. acuta diffusa.
13. Abscessus alv. circumscriptus (seu extra alveolaris). 14. Periostitis chron. circumscripta.
15. Periodont. acuta circumscripta (consecutiva). 16. Pulpitis chron. hypertrophica granulomatosa.
17. Pulpitis chron. totalis purulenta. 18. Periodont. acuta apicalis.
19. Periostitis alveol. chron. diffusa. 20. Caries alveolaris partialis.
21. Periodont. acut. purulenta diffusa. 22. Abscessus apicalis.
23. Periodont. chron. granulomatosa (apicalis). 24. Phlegmone acuta sceptica osteo-periodontalis.
25. Abscessus (processus) alveolaris diffusus. 26. Periodont. chron. purulenta.
27. Periodont. chron. granulomatosa (diffusa). 28. Pulpitis acuta partialis purulenta.
29. Periodont. acuta marginalis. 30. Pulpitis chron. idiopath.
31. Caries alveolaris universalis)*. 32. Dissolutio Pulpae absoluta.

* It must be added that the neglect of caries alveolaris (Pyorrhoe) universalis can only be due to the small consideration given to this disease in the hospital, to which must be added that the patients, especially poor people,

Let us now consider the frequency of each form of disease in its connection with special teeth. It is not our intention to give the percentage of every disease that has any connection with the individual teeth. We shall only do this in the commoner forms, when, in consequence of the greater number of cases the difference of the percentage is more evident.

The statistics of the other varieties show a similar result.

The Pulpitis chronica parenchymatosa, as is shown by the adjoining table of frequency, is the most common of all the different diseases. In the following table we will draw a few comparisons between those forms of diseases which show a special tendency to attack particular teeth. The first lower molar was attacked by different inflammatory processes in 441 cases. $\frac{1}{3}$ part of these by pulpitis chronica parenchymatosa; $\frac{1}{4}$ part by perioditis chronica; $\frac{1}{4}$ by pulpitis chronica gangrenosa; $\frac{1}{8}$ pulpitis acuta partialis; $\frac{1}{12}$ gangrena pulpæ totalis; the remainder come under the head of the diseases.

The first upper molar had, in 349 cases, been attacked by inflammation. $\frac{1}{3}$ of the cases were periodontis chronica diffusa; $\frac{1}{4}$ pulpitis chronica gangrenosa; $\frac{1}{8}$ pulpitis chronica parenchym; $\frac{1}{8}$ pulpitis acuta partialis; $\frac{1}{11}$ gangræna pulpæ totalis.

The second lower molar was affected by inflammation in 287 cases, in the following proportions:— $\frac{1}{3}$ pulp. chr. parenchym; $\frac{1}{4}$ period. chr. diffusa; $\frac{1}{8}$ pulp. chr. gangrænosa; $\frac{1}{12}$ pulp. acuta partialis and necrosis totalis.

The second upper molar (166 cases). $\frac{1}{3}$ pulp. chr. parench.; $\frac{1}{4}$ period. chr. diffusa; $\frac{1}{8}$ gang. pulpæ totalis; $\frac{1}{11}$ pulp. chr. gang.

The first upper bicuspid (163 cases). $\frac{1}{3}$ pulp. chr. parench; $\frac{1}{4}$ period. chr. diffusa; $\frac{1}{4}$ pulp. acuta partialis; $\frac{1}{8}$ pulp. chr. gangrænosa.

The diseases of less frequency occur principally in the front teeth of the upper jaw, as far back as the first molar. On the other hand, diseases of less frequency beginning at the first molar and going backwards, seem equally divided between the upper and lower jaw. It is besides a peculiar circumstance that the frequency of all inflammatory diseases in the upper jaw increases to the first molar, and from thence decreases. The first

hardly care to complain of a disease which they can scarcely feel, or that can easily be borne. We will however consider this more attentively in its proper order next month.

molar therefore represents the culminating point of frequency. The same order also occurs in the lower teeth. The first molar is also that tooth in which the inflammatory diseases, even taken singly, occur most frequently, and there is hardly any disease that one has not the opportunity of investigating in this tooth.

From this it may be observed that the table arranged according to frequency in the different forms of diseases, is borne out with few exceptions, also by individual teeth. It may not be uninteresting to learn whether the inflammatory diseases are more common in the upper than the lower teeth.

The material at our command in a tabular form enables us to answer this question approximately.

Considering the teeth individually, the inflammatory diseases in the upper incisors, canines and bicuspid, occur more frequently than in the corresponding lower ones. But this is not the case with the molars, the lower of which suffer more than the upper. But taken altogether, the number of inflammatory diseases is but little greater in the upper than in the lower teeth.

To assist in a cursory view of the subject, we have prepared Table I, in which the frequency of inflammatory diseases of the teeth is shown according to the species of the tooth. Side by side with this we have placed a Table prepared by Alfred Kay, which shows the frequency of caries according to the species of the tooth.

TABLE I. <i>Inflammatory Diseases.</i>				TABLE II (<i>Kay</i>). <i>Caries.</i>			
			Total				Total
First lower molar	...	...	441	First lower molar	...	...	739
Second upper ditto	...	...	349	First upper ditto	...	...	358
Second lower ditto	...	...	290	Second lower ditto	...	...	193
First upper ditto	...	...	166	First upper bicuspid	...	...	103
First upper bicuspid	...	...	163	Second upper molar	...	...	95
Third lower molar	...	...	98	Second lower bicuspid	...	...	91
Second upper bicuspid	...	...	86	First lower ditto	...	...	80
Third upper molar	...	...	86	Second upper ditto	...	...	61
Upper central incisors	...	...	74	Upper canine	...	...	44
First lower bicuspid	...	...	69	Third lower molar	...	...	43
Upper lateral incisors	...	...	66	Upper central incisor	...	...	41
Second lower bicuspid	...	...	59	Third central molar	...	...	40
Upper canines	...	...	49	Lower canine	...	...	23
Lower canines	...	...	14	First upper incisor	...	...	21
Ditto central incisors	...	...	9	Second lower ditto	...	...	17
Ditto lateral incisors	...	...	6	First lower ditto	...	...	17

From this evidence, it is clear that the different species of teeth are almost all equally attacked, on the one hand by inflammatory diseases, and on the other hand by caries. We have paid no attention to sex in arranging our numbers, but as the frequency of inflammatory diseases keeps step with that of caries, the statement of Magitot and Kay may be accepted as true of inflammatory diseases as well as caries, that the proportions of male to female caries is 2.3.

On Regulating Teeth.*

By S. A. T. COXON.

IN regulating the teeth, the first thing to be considered is the age. I think the proper time to commence is between eleven and fourteen years of age, although we are often troubled, by the parents of our patients, to commence earlier. I believe many minor irregularities correct themselves before the age of twelve, that is, if the second bicuspid on each side is **extracted**, in the case of very prominent teeth. I have often seen the space gained entirely filled up at fourteen, without the aid of regulation plates. On the other hand, in cases where the arch is very narrow and contracted, and the teeth very crowded, I should recommend that an expansion plate be applied as soon as possible, with very gradual and steady pressure, it being borne in mind, if applied early, that *the roots of the permanent teeth are not fully formed*. One of the most necessary things to be remembered in regulating the teeth, is to keep up this constant pressure. When once the tooth has been started in the right direction, the pressure must be kept slowly, but surely, upon it, until it attains its proper position. I strongly object to the use of undue force, as it only results in tenderness of the tooth, and often inflammation. In many cases, if this occurs, we have great difficulty in making our patients wear their plates regularly, and unless this is done, there is little hope of success in obstinate cases, for a week without a plate will often destroy the work of months.

The next thing is the material to be used in taking the impression. For this purpose I most decidedly prefer gutta percha, as it will take slight undercuts, and give a sharper impression than

* Read at the Annual Meeting of the Eastern Counties Branch, July, 1887.

anything but plaster, and if it is at once placed in cold water, there will be no shrinkage.

For the general expansion of the mouth, I am a firm believer in the Coffin spring plate, as I consider it will expand the dental arch in a surer and steadier manner than any other apparatus that we at present possess, and after sufficient room has been once obtained, it is seldom difficult to turn the teeth into their proper places. I nearly always resort to piano wire, the steady pressure of which will, as a rule, move any tooth, if the requisite space has been made for it. There is one thing I would here mention, I strongly object to the wire itself coming in contact with the tooth. This may at all times be easily obviated by tinning the ends, in the same manner as you would the part that is held by the vulcanite (for it is with this material that I nearly always make the plates). If you neglect to tin the end that comes in contact with the tooth, you will find there a black spot, which, although easily erased with pumice, cannot fail to injure the enamel. I have here a few springs, such as I generally use, ready tinned and prepared for insertion into the wax, which is to found the model of the vulcanite plate. You will notice that some of them are tipped with gold. The method I adopt of getting these tips to adhere to the steel, is to melt a small piece of gold solder on the block, and then, having thoroughly cleansed a piece of piano wire by dipping it into fresh ground borax and water, the piece of already melted solder and the steel are placed together, and will readily unite if carefully handled. The heat, if only applied to the tip of the wire, will not be sufficient to take away the temper. At the same time, I may say I consider tin answers all ordinary purposes. With regard to the strength of the spring, that must entirely depend upon what it has to do, but it can always be made more elastic by being turned once round the end of the pliers. On the card you will find an example.

Of the models I am now about to bring to your notice, one is a case of thumb-sucking, another of crowding, while in the third the centrals have been made to turn half a circuit.

This one is the case of crowding. The patient was a young lady, and her mother desired me to remove the canine, which, as you will see by the model, was very troublesome to the upper lip. After examining the mouth, I found the six year old molars so badly decayed that I decided to remove them. I then told the patient to come to me again in three months, after which time the

right second molar had made a fair appearance, and the left one was just commencing to show itself—this one—almost in the same position which the first molar had occupied. An expansion plate, which capped both the bicuspid, was applied, and after gaining a fair amount of room, I placed what I term a pull back spring on the right side, which drew back the bicuspid, capping the right molar and the left bicuspid to hold the plate firm. The advantage of these springs over rubber bands, is that they do not spring off the teeth, and are easily contracted, as the teeth recede before the pressure. The required room being now gained, I placed a spring on the labial side of the tooth and forced it inwards; the other slight irregularities were then treated. As you will see by the models, the space that was obtained by the extraction of the molars is now fully filled up, and the canine is in its proper place in the arch.

Case No. II. shows models of the mouth of a young lady who has been addicted to thumb-sucking. In the first model you will see that the right lateral has been extracted on the one side, and the first left bicuspid on the other. It is needless to say what a terrible mistake this was, but the mischief was done, and the centrals had thus been made to diverge one from another. When I first saw the patient, the thickness and flatness of the palate directly behind the centrals, caused her to articulate some words very badly. After some deliberation I decided to extract the right second bicuspid. I then placed in the mouth what I term a T plate, which consists of two pieces of wire soldered together in the shape of a T, connected by a rubber band, with a hook in a vulcanite plate which capped the first and second molars. This gradually brought the teeth back and filled up the space from which the right bicuspid had been extracted. I then used an expansion plate and expanded the mouth laterally. The result was that the shape of the palate began to improve, and the upper incisor teeth touched upon their antagonists of the lower jaw. This case is of particular interest, as it shows how much the shape of the palate may be altered. You will see this by comparing the first and last model. The treatment, I should add, had also the desired effect upon the articulation of the patient, who previously spoke very short-tongued.

The third case is one in which the whole mouth is crowded, particularly the central incisors, which are so twisted that their distal edges turn outwards, the laterals standing partly behind

them; the left canine is also crowded out in front, the right one not having made its appearance. In this case the first molars were in a bad state of decay and one of them had developed alveolar abscess; I therefore decided to extract them. As soon after this as it was possible for the patient to wear it comfortably, I placed in the mouth an expansion plate. This was worn for some time, but with no very great success, so I placed a wedge between the centrals similar to one with which you would divide teeth for stopping. I then placed in the mouth a piece of gold in the shape of a T, strong and flattened, the tail of which was inserted into a vulcanite plate which capped the bicuspid. In the plate was also a small forcing spring which acted on the left lateral, driving it away from the back of the central. But to return to the T plate. As you will see if you look at the model, the bar of the T rests on the distal edges. These ends were tightened so that the plate went in very tightly, and the vulcanite was cut away from behind the distal lingual edges, but left to stand well up towards the mesial edge so as to act as a fulcrum. The power of this instrument is wonderful and it turned the teeth very easily. At the same time I was desirous that it should not act too quickly for fear of injury to the roots. You will see by the models the effect it has had in bringing the centrals into their proper position. The mouth in the last model presents a very flat appearance, but this will soon be altered when the longed-for right canine has fully developed itself. As you will see, it is now making its appearance through the germ, and I am at present drawing back the bicuspid. This is all I have to say about this unfinished case. I have brought it forward particularly to describe the use of the T plate, which, if you ever use it, you will find to be very simple in its action, but very powerful in its results.

One word more with regard to the retaining plate. Unless the patient is taught the necessity of wearing this regularly, I fear our trouble will be in vain. I am firmly of opinion that it should be worn for, at least, two years after the operation is completed.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

The Odontological Society of Great Britain.

THE last meeting of the Session 1886-87, took place at 40, Leicester Square, on Monday, the 6th ult., Mr. C. S. TOMES, F.R.S., President, in the chair. There was a full attendance.

Mr. J. Bland Sutton and Dr. Dudley Buxton were unanimously elected honorary members of the Society, and the Curator announced donations to the Museum from Messrs. A. B. Alexander, Rogers (of Cheltenham), and R. J. Larking.

Mr. HENRI WEISS showed the crown of a lower right first bicuspid, the loss of which had been consequent on inflammation spreading from an alveolar abscess attached to the first deciduous molar. The patient, a little girl four years old, was brought to him at the National Dental Hospital with a history of several attacks of swelled face. On examination, the necrosed cap was seen lying on the surface of the gum, and at first sight was taken to be the root of the deciduous tooth. The point of interest in the case was with reference to the treatment of alveolar abscess in children. All were aware of the great advantage of retaining a temporary tooth until its successor was ready to take its place, but on the other hand permanent teeth were not very unfrequently lost or damaged in the way this tooth had been, and this might be prevented by the extraction of the temporary tooth. Could any rule be formulated to govern the treatment of such cases?

Mr. ACKERY said that such cases were unfortunately much too common. He had quite recently had a child brought to him with the root of a first temporary molar, and the necrosed crown of the corresponding bicuspid both lying on the surface of the gum; he removed them together.

Mr. STORER BENNETT showed a curious specimen of abnormal tooth development which he had discovered in one of the jaws from the Wiltshire barrow, which had been exhibited to the Society some months previously by Mr. Cunningham. It was the lower jaw of a child, and on examination he found one of the second bicuspid, partially formed, in an inverted position, with its cusps downwards and the root upwards between the fangs of the second temporary molar.

Mr. W. WEISS showed for Mr. J. B. Bridgman, of Norwich, models of a case of irregularity in a girl aged eighteen, one of the worst he had ever met with, and requested the advice of

members as to the mode of treatment most likely to effect a speedy improvement. The peculiarity of the case was that the upper centrals were almost directly in front of the laterals and also outside the arch. The general opinion was that the centrals should be extracted.

MR. BOYD WALLIS showed a very handy little instrument for removing cotton dressings, designed by Mr. Butler Smythe, of Brook Street, and Mr. S. J. HUTCHINSON exhibited the Welsbach Incandescent Light, consisting of a small Bunsen burner which, when covered with a cap made of cotton impregnated with some mineral salt, gives a very brilliant white light with very little heat.

Professor VICTOR HORSLEY, F.R.S., then read the paper of the evening, on "The Pathology of Inveterate Neuralgia of the Fifth Nerve."

Professor Horsley first gave a short history of three cases of this distressing malady which he had treated with apparent success; two of the patients were shown at the meeting. The first was that of a man, aged sixty, who had suffered for seven years before he came to Mr. Horsley. All the branches of the fifth nerve were affected, but the pain appeared to arise about the centre of the malar bone and radiated from that point all over the left side of the face. Thinking that the source of irritation was in the superior maxillary division, Mr. Horsley cut down upon the infra-orbital branch, and following it up removed the nerve as far back as the foramen rotundum. The patient was entirely relieved for the time, but the pain soon returned in the palate. Mr. Horsley then cut down upon and removed the palatine nerve. After this the pain ceased for seven months, when it recurred as badly as ever in the inferior dental nerve. It being evident that the source of irritation must be higher up the trunk of the nerve, Mr. Horsley determined to remove this close to its exit from the skull. He made a vertical incision, with strict antiseptic precautions, just in front of the ear, extending from the zygoma to the angle of the jaw. From this point a further cut was made along and below the edge of the jaw as far as the facial artery. The flap of skin thus marked out having been raised, a horizontal incision was made through the fascia covering the masseter along the edge of the parotid gland, which was then carefully separated from the muscle and raised upwards and backwards. An incision was next made through the masseter itself and kept open by means of retractors.

The jaw was next trephined just in front of the ridge which runs down the outer surface of the ramus from the condyle, and the hole enlarged by cutting away the bone between it and the sigmoid notch. The inferior dental nerve was thus exposed close to the upper end of its canal, and could be followed upwards by pressing aside the fat and vessels to within half an inch of the foramen ovale. Here it was divided and about an inch removed. The wound was then closed and dressed antiseptically. By this operation the trunk of the nerve was exposed without injuring any important structure and without leaving any noticeable scar, provided, of course, that union took place by first intention, and this he had succeeded in obtaining in all his cases so far.

This patient had enjoyed more than a year of complete relief, though within the last week he had had a few twinges of pain in the palate. The other cases were very similar to this one, and equally satisfactory as regards the results obtained.

All these patients had only come under his observation at a very late stage of the malady, the shortest period being three and a half years after the onset of the mischief, and in one case as much as seven years after. All had been practically edentulous when they came to him, and from all of them after the operation he had heard the same story, viz., gratification at being relieved from pain and regret at the loss of so many sound and useful teeth. Were there, then, no indications by which it was possible to diagnose pain which was due to mischief somewhere along the trunk of the nerve from that which was due to disease of the teeth? If that could be done with some degree of certainty it would mark a very important advance in dealing with these painful and often troublesome cases, and it was with the hope of obtaining some help from the members of the Odontological Society in deciding this question that he had brought the subject before the Society.

Pain referred apparently to the infra-orbital nerve, for instance, might be due to mischief of cerebral origin, to irritation somewhere along the trunk of the nerve, or at its peripheral extremity. It was scarcely necessary to dwell on the possibility of the pain being due to intra-cranial mischief, since the general rules applicable to this class of cases would generally suffice for the discovery of the true seat of the trouble. But the diagnosis between some affections of the trunk of the nerve and of its peripheral termination,

was not so easy, and this was the point upon which he asked their assistance. As he had already stated, he had no experience of the initial stages of the trouble, the time at which it was most important that a correct diagnosis should be made, and conclusions based upon the symptoms of the later periods of the disease might not be altogether reliable when applied to explain those of an earlier. But judging from his own experience he thought there were points which might assist an attempt at such a diagnosis as he had suggested.

Trophic changes, when present, were a very valuable indication of mischief in the trunk of the nerve. In cases of irritation affecting the termination of the nerve no changes would be met with in parts supplied by other branches of the nerve. There might be reflex pain, but this was not accompanied by muscular wasting and other obvious changes in the parts to which the pain is referred; whereas pain due to disease of the nerve trunk was frequently or usually thus accompanied. Various other pathological conditions might be met with besides wasting. Thus, in one of his cases, the lower lip was greatly swollen and excessively sensitive, the skin being glazed and shiny. Or instead of this state of chronic congestion, the vessels might be at one time dilated and at another in just the opposite condition.

Then there might be some abnormal condition of sensation. In an ordinary case of toothache, all the branches of the fifth nerve might seem to be affected. But in cases where the disease was in the trunk of the nerve, the skin might be hyperæsthetic in one place and anæsthetic at another. Was this condition ever met with as a reflex effect of dental irritation? Another well-known form of hyperæsthesia which, so far as he was aware was only met with when the disease is in the trunk of the nerve, was this, viz.: when gently touching the skin causes extreme pain, whilst firm pressure causes no pain at all.

The origin and character of the pain might sometimes be useful as a means of diagnosing the two conditions. He found that in the majority of cases the patient said the pain began in the teeth, but in some it was said to begin in the bone and in others in the skin. If the patient stated distinctly that the pain began in the bone or in the skin and only affected the teeth subsequently, he thought it might be inferred that the disease was in the trunk of the nerve. Whilst if the pain were primarily referred to the teeth, it might be due to them or it might not. He thought that

constant pain was in most cases an indication of a peripheral origin, whilst if it were intermittent the cause was more probably in the nerve trunk.

With regard to the exciting agents. If the pain was brought on most commonly by *movement*, this would seem to indicate affection of the nerve trunk. The patients on whom he had operated all stated that movement, opening the jaw to eat or to talk, brought on pain. It seemed obvious that the action of the muscles in opening and closing the jaw must press upon, and the movement of the jaw must stretch the inflamed nerve, and thus give rise to pain. So far as he was aware, the effect of movement in causing pain was not so great in cases where this was due to peripheral irritation. No general conclusions could be drawn from the effects of heat or cold or other exciting agents.

If in addition to severe pain over the area of distribution of the nerve, distinctly tender spots were met with along the course of its branches, this was generally an indication that the whole nerve was in a state of irritation, but a somewhat similar condition might sometimes be met with as the result of peripheral irritation.

With regard to the treatment of these cases, he had used opium, ether, cocaine, croton-chloral, and other drugs, but all failed sooner or later. Of course any sources of dental irritation should be removed, and in some cases this would effect a cure. He thought that experience had made it clear that nerve-stretching, although a satisfactory operation in the case of some nerves, should not be performed on the fifth. Although it gave relief for a time, the pain invariably recurred. Avulsion, on the other hand, generally cured; but the success of the operation seemed to depend greatly on success in obtaining primary union. It might have been feared that removal of the nerve might interfere with the nutrition of the parts supplied by it, but as a fact, no bad effects followed the operation.

In conclusion, he regretted that he had only been able, in the time, to touch upon the principal points which seemed likely to lead to a full appreciation of the causation and pathology of this affection, and if some of the points relating to its earlier stages could be cleared up by the wide experience of the members of the society, he thought an important advance would be made.

The PRESIDENT said there was one fact in connection with these neuralgia cases which had always been a great puzzle to him; he hoped Professor Horsley might be able to throw some light

upon it. He could never quite understand how it was that great relief was often obtained in these cases by doing the wrong thing, by doing something which subsequent experience showed could not have touched the root of the evil. Thus, in one case he first divided the inferior dental nerve at the mental foramen, and the patient was completely relieved for the time. But a relapse occurred, and the nerve was then destroyed by drilling into the inferior dental canal. This gave relief for eight months, when the patient came saying that the pain had returned, and begging that the operation might be repeated. It was repeated, but did no good whatever. Next, the nerve was exposed inside the jaw and stretched. This did good for a time, but did not effect a cure. Why was it that these operations so often did good, though they could not have reached the actual seat of the evil?

Professor Horsley seemed to lay some stress on the trophic alterations which were seen in these cases as an indication that the mischief was in the trunk of the nerve. But these trophic lesions were often absent; he had himself seen three cases of very severe epileptiform neuralgia in which these changes, if they existed at all, were not noticeable.

Professor Horsley had also suggested that pain of an intermittent character was suggestive of disease of the nerve trunk. But he (Mr. Tomes) thought that all dental practitioners would be familiar with the fact that intermissions occurred in cases where the pain was clearly of peripheral origin; indeed, intermittent pain was rather characteristic of mischief in the tooth pulp.

Mr. J. S. TURNER said he had often noticed in these cases the peculiar sensibility spoken of by Professor Horsley, viz., that the patient would shrink when the skin in the neighbourhood of the painful spot was lightly touched, but if firm pressure was made, the pain was not felt. The same thing was seen in the eye. The experienced ophthalmic surgeon handled the eye in what appeared to be a very rough manner, but he really caused the patient less pain than the timid operator who approached the eye gently. Professor Horsley had expressed an opinion that the fact that the pain was increased by movement, was an indication that it was due to disease of the nerve trunk. But there were many obscure causes of pain in the teeth which rendered the diagnosis of its central or peripheral origin very difficult. He had in mind a case which occurred a good many years ago in the practice of a well-known member of the profession, in which intense pain was

brought on by movement. When at rest the patient suffered little or no pain. A tooth was at last extracted, in the canal of which was found a loose piece of secondary dentine, the movement of which when the patient moved had caused the pain.

Mr. STORER BENNETT said Professor Horsley had asked whether they were aware of any cases of trophic lesions of distant parts which were distinctly traceable to the teeth. He had a very distinct recollection of a trophic lesion of that character in a girl who had suffered for many months from an ulcer of the cornea, which had been treated without success by several surgeons. At last she applied to Mr. Nunn, who expressed an opinion that the ulcer was dependent on the delayed eruption of a canine, and that when this was erupted the ulcer would disappear; and this proved to be the case.

With regard to the question of referred pain, he thought all must be familiar with the occurrence of painful spots due to dental irritation, but situated at a distance from the actual source of mischief. Thus it was common to meet with a painful spot just in front of the ear in cases where the pulp of a molar tooth was exposed or pressed upon, or whilst it was being treated with arsenic.

He quite agreed with the statement of the President that intermittent pain was rather characteristic of local mischief in the teeth than of a lesion in the nerve trunk, and therefore could not be relied upon as an aid in diagnosis in the way Professor Horsley had suggested.

Mr. S. J. HUTCHINSON expressed an opinion that in most of these cases the original cause of the mischief was some peripheral irritation, such as calcification of the tooth pulp, pressure of cicatrix after extraction of a tooth, the irritation of decayed or misplaced wisdom teeth, &c., and that it spread upwards, gradually affecting the nerve higher and higher.

Messrs. Henri Weiss, Stocken, Betts, and Ashley Barrett also joined in the discussion, after which Professor Horsley replied.

The PRESIDENT then thanked the author of the paper on behalf of the Society and announced that, according to present arrangements, a paper by Mr. Bland Sutton would be read at the November Meeting.

The Society then adjourned.

REVIEWS AND NOTICES OF BOOKS.

MECHANICAL DENTISTRY, by CHARLES HUNTER. Crosby Lockwood & Co.

MR. HUNTER'S work on Mechanical Dentistry is distinguished from some larger manuals by its practical character. Dealing with such a subject, a writer finds the desire to make suggestions which have the air of novelty altogether overpowering. Hence a number of methods which every practical workman, save the particular writer himself, will look upon either as "fads" or as cunning devices to be admired rather than imitated. The merit of this little volume lies in the fact that these "admirable suggestions" are few and far between. They are, of course, to be met with. We wonder, for instance, how many workmen would resort to the author's two methods of determining the quantity of rubber required for each vulcanite piece. The description—with an accompanying engraving, the existence of which may perhaps have prompted the description—occupies about two pages, but briefly it amounts to this, that the rubber is to be measured weight for weight or bulk for bulk against the wax removed from the flask. All we have to say of this is that the workman who adopts either of these plans is to be congratulated on the time at his disposal or complimented on his passion for arithmetical exercises.

Among the strong chapters in the book are those on casting and striking plates. The former contains some suggestions which are valuable, though the occasions on which they need to be put into exercise are very few. In the old days of bone work we were familiar enough with the practice of cutting off an overhanging tooth and replacing it when the general fitting was done. As to the need of resorting to the practice in order to get a zinc cast we are sceptical. Indeed, theory on one side, we believe that a metal cast can be obtained for all practical purposes from almost any model. Nor have we ever found the need to generally cut down long teeth in order to avoid cracking a plate in the act of swaging. There are one or two other suggestions which seem in the nature of concessions to weak work to which it is not perhaps necessary to refer.

Under the head of plate-making, an opinion might have been offered on the rather important point of the thickness of plates. The common practice is now to have them very thin, but there

are still dentists who use Ash's No. 9. The writer, judging from methods of work which he describes, evidently favours thin plates, though he does not absolutely say so. We feel disposed to enter a protest against one of his methods. If a plate rocks on the outer borders after striking, he advises the use of an ordinary pair of pliers. We were taught—we forget how many years ago—that to fit a plate with pliers was a cardinal sin; and it strikes us as amusing that a gentleman who can advise an expenditure of time to measure vulcanite in a glass, should grudge the moments requisite for the taking of an extra metal cast. The chapters on celluloid and on artificial palates appear to owe less than the others to the writer's practical experience. Indeed, Mr. Hunter acknowledges his indebtedness to Dr. Richardson's work for the one, and quotes Mr. Gartrell in respect of the other. But even here what he says is well and plainly put. While, therefore, parts of the work contain suggestions and hints of service to the practised workman, the whole of it will prove of infinite use to the student and to those preparing for the examination of the college. Within reasonably narrow limits it touches on almost every point likely to be made the subject of enquiry by an examiner.

We cannot close the notice without congratulating the writer on the merit of the work from a literary point of view. The descriptions are so clear that there is little or no difficulty in following any of them, and it is possible to say as a critic once said of another writer :—

“ I've read his book from end to end,
And what I praise not still can comprehend.”

MINOR NOTICES AND CRITICAL ABSTRACTS.

Lectures on Certain Diseases of the Jaws.

Delivered at the Royal College of Surgeons of England, June, 1887.

BY CHRISTOPHER HEATH, F.R.C.S.

HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY.

LECTURE I.—ON CYSTIC DISEASES OF THE JAWS.

MR. PRESIDENT AND GENTLEMEN,—The occupant of the Hunterian Chair of Surgery and Pathology in this College has a large choice of subjects on which to address you, and my predecessors in office have accordingly ranged at will over the domain

of surgery. I propose to confine myself to a comparatively small portion of surgery, but one of no little importance, and shall have the opportunity of referring for illustration to that splendid collection of pathological specimens which, begun by Hunter, has in this special department been greatly enriched by the labours of Liston and Fergusson, and is now without a rival in its perfection.

The "Injuries and Morbid Affections of the Maxillary Bones and Antrum" was proposed as the subject of the Jacksonian Prize in this College in the year 1827, but no dissertation was sent in for competition. The same thing again occurred in 1842, and this is the more remarkable because the majority of Liston's great cases had occurred before this date, and both he and Fergusson were then actively engaged in instructing large numbers of pupils, some of whom might have reduced their teaching to paper.

In 1867, "The Injuries and Diseases of the Jaws, including those of the Antrum, with the Treatment by Operation, or otherwise," was again put forth as the subject for the Jacksonian Prize Dissertation, and having seen much of Sir William Fergusson's practice, and having myself done some little work in the same direction, I ventured to compete, and had the satisfaction both of being successful and of adding to the museum a considerable number of valuable preparations, many of which I shall bring before you.

DISEASES OF THE ANTRUM.

The antrum maxillare, or sinus of the upper jaw, was known as early as the days of Galen, but was first described with any degree of accuracy by our fellow-countryman, Nathaniel Highmore, of Sherborne, whose *Disquisitio Anatomica Corporis Humani* was published at the Hague in 1651. By the kindness of a former pupil, Mr. W. H. Williams, of Sherborne, whose wife is a direct descendant of Nathaniel Highmore, I am enabled to place before you the author's own copy of his anatomical work, bearing on the title-page the signatures of successive incumbents of the Sherborne practice. And yet it is remarkable that the copy of the same work in our College library is more perfect in containing a curious allegorical frontispiece, which is wanting in the Sherborne copy, although the *Frontis physiognomica descriptio* is there. At page 227 of this work will be found a plate illustrating (not quite correctly) the anatomy of the antrum, and from it Figs. 1 and 2

are reproduced. In another figure is shown a curiously inaccurate drawing of the antrum, which, as the author says, "is more frequently empty, but is sometimes found filled with mucus, into which the humours from the head are able to distil by a certain meatus from the cavity in the frontal bone and from the ethmoid bone." I need hardly say that there is no such communication with the frontal sinus as is here figured, any more than there is any passage from the pituitary fossa to the palate, which is given in the same drawing.



Fig. 1.

Fig. 2.

The only normal opening from the antrum is into the middle meatus of the nose, and this is shown on the section of the skull before you, on one side with the mucous membrane *in situ*, and on the other with it removed. The size of the aperture found in a macerated superior maxilla gives a very exaggerated idea of the opening in the articulated skull, where it is encroached upon by the palate, inferior turbinate, and ethmoid bones, which narrow and sub-divide the opening into two parts. In the recent subject these are covered in by the mucous membrane of the nose, so that ordinarily there is only a small oblique aperture left in front of the unciform process of the ethmoid, and close behind the infundibulum. It should be observed that this opening is at the upper part of, and not near the floor of, the antrum, and that it opens into the middle meatus of the nose. Occasionally a second smaller aperture is found behind this, and nearer to the floor of the sinus, which has always been regarded as a natural formation. M. Giraldès, however, in his *Recherches sur les Kystes Muqueux du*

Sinus Maxillaire (Paris, 1860), maintains that the posterior opening, when it exists, is always the result of pathological change and that the anterior opening is into the infundibulum, and not into the meatus itself. I believe that slight variations in the position of the opening exist; but it is undoubted that the aperture is very minute, and quite inaccessible from the nose.

Highmore describes the antrum as "a hollow, spherical or somewhat oblong in shape, and large enough to hold the terminal phalanx of the great toe." The fact is, that the size of the antrum is very variable, and this point was carefully investigated some years ago by the late Mr. W. A. N. Cattlin, F.R.C.S., who published a valuable paper in the *Odontological Society's Transactions*, Vol. ii., from which the following illustrations are taken.

As the result of the examination of a hundred specimens, Mr. Cattlin found that, as a rule, the antrum is larger in the male than in the female, and that it diminishes in size with extreme age. In the young subject likewise the cavity is small, and its walls comparatively thick. Fig. 3 shows in a transverse section both

Fig. 3.

the roof and floor of an adult antrum of the common shape and size, capable of containing two drachms and a half of fluid; but a large adult antrum may be capable of containing eight drachms of fluid, whilst a small adult antrum containing only one drachm of fluid has been seen. The two antra are often unsymmetrical in size and shape; thus Fig. 4 shows a much larger and deeper

cavity on one side than on the other. The antrum may even extend irregularly into the malar bone, forming a supplementary cavity there; but the most remarkable variation is due to the development of the ridges of bone which sub-divide the cavity; these are very variable in size and shape. Fossæ of considerable depth are often found in the floor of the antrum, particularly at the anterior and posterior extremities, of which Fig. 5 is a good example, showing on one side a perforation by an alveolar abscess. A rare form is when fossæ or cells are developed beneath the orbital plate, or a *cul de sac* is formed close to the lachrymal groove.

Fig. 4.

Suppuration in the antrum, or, as it is sometimes termed, *abscess*, is ordinarily the result of inflammation extending from the teeth to the lining membrane of the cavity; and the disease might, therefore, be not incorrectly termed an empyema, as proposed by Otto Weber. The roots of the first and second molar teeth often, and the bicuspid and canine occasionally, form prominences in the floor of the antrum; and when these teeth become carious, the thin plate of bone covering their fangs not unfrequently becomes affected, and disease is set up in the cavity. The fangs

of the first molar tooth are occasionally found in health to be uncovered by bone, and to project beneath the lining membrane of the antrum; and, under these circumstances, irritation and inflammation would be still more likely to occur. But an abscess may be formed in the alveolus, and eventually burst into the antrum, though connected originally with teeth not usually in relation with the cavity.

Fig. 5.

The symptoms of suppuration in the antrum are at first simply those of inflammation of the lining membrane—dull, deep-seated pain shooting up the face and to the forehead, tenderness of the cheek, with some fever and constitutional disturbance; but occasionally the pain is most acute, and of a sharp, stabbing, neuralgic character. A slight rigor may usher in the formation of matter, which will find its way into the nostril when the patient is lying on his sound side, either through the normal aperture or through an opening caused by absorption, as maintained by M. Giraldès. An offensive odour is now sometimes perceptible to the patient, though not to those around him—thus differing markedly from what occurs in ozena—and a sudden discharge of matter from

nostril, when blowing the nose, may relieve all the symptoms for the moment. The more common course of events is, however, that without any acute pain the patient notices that he has a purulent discharge from the nose when blowing it, and perhaps is aware that, when lying down, the discharge finds its way into the throat. This latter point is often overlooked, however, though there may be a complaint of a very disagreeable taste in the mouth and a tendency to nausea in the morning, with a hawking up of pellets of inspissated pus.

With all this there is no distension of the antrum, and it is this fact which frequently misleads the practitioner. It is certain, however, that in health there is invariably an opening between the antrum and the nostril ; and that, even when this is closed, the wall is very thin and readily absorbed ; and it is quite exceptional therefore, when the antrum is so distended with pus as to give rise to any prominence of the cheek. Undoubtedly cases of this kind have been recorded, but it may be doubted whether some of them were not examples of cyst, the contents of which had become purulent ; for we know that cysts in the wall of the antrum readily produce great deformity. The natural opening into the nose is not at the level of the bottom of the cavity of the antrum ; and hence there is always a small residuum of discharge, which the patient can only partially get rid of by holding the head on one side.

Given a patient who complains of purulent discharge from the nostril, with occasionally a disagreeable smell, and the case is too apt to be put down as one of ozæna, and treated by nasal douches, snuffs, &c. But, as already mentioned, the offensive smell is perceived only by the patient, and not by his friends, the reverse being the case in ozæna ; and, again, the discharge is only occasional, is determined by the position of the head, and is simply purulent, whereas in ozæna the discharge is constant, and mixed with offensive crusts from the nasal cavities. Again, the dull ache, varied occasionally by acute pain, is apt to be referred to the teeth alone, and the most careful examination may fail to detect any special tenderness in any one tooth. Hence after exhausting the usual routine remedies for neuralgia, I have known wholesale extraction of useful teeth undertaken with no benefit, unless it should fortunately happen that the tooth which has perforated the antrum should be extracted early, when the discharge of pus at once clears up the nature of the case.

A still more serious result may ensue if the neuralgia should, as it often does, take the form of frontal headache, and thus lead the surgeon to suppose that the discharge comes from the frontal sinus. I have twice been consulted in cases in which enterprising surgeons had proposed to trephine the frontal sinus, regardless of the serious injury to the patient's good looks, for chronic discharge which I proved to be solely due to suppuration in the antrum.

The more ordinary consequence, however, of an unrecognised empyema of the antrum is the damage done to the digestive organs by the constant swallowing of purulent fluid during sleep. Under these circumstances the patient is always ailing, is unable to take food in the morning, and may be reduced to a state of great prostration even dangerous to life. The usual remedies for indigestion are likely to be of little service so long as the purulent drain continues.

In exceptional cases the pus, not finding an exit, distends the antrum, causing partial absorption of the walls, and thus both bulging out the cheek and thrusting up the floor of the orbit. Under these circumstances, the affection is readily recognised by the peculiar crackling which is perceived when the thinned bone is pressed upon, and the matter if not evacuated, will shortly find a way out for itself, either by the side of the teeth, through the front wall of the antrum, or through the floor of the orbit; in either of which cases considerable necrosis and ultimate scar are likely to be the consequences. The possibility of both antra being affected either simultaneously or consecutively must not be overlooked.

The elevation of the floor of the orbit already described, may simply displace the eyeball and render it temporarily blind, as in a case recorded by Mr. J. Smith, of Leeds (*Lancet*, February 14th, 1857), or it may lead to permanent amaurosis—a point to which Mr. Salter called especial attention in the *Medico-Chirurgical Transactions* for 1862.

The treatment of suppuration of the antrum consists, in the first place, in the extraction of all decayed teeth or stumps in the affected jaw, and with this object in view those teeth which are apparently sound should be tested by a sharp knock with some metal instrument, when, if tender, they should be extracted. If the cause of the mischief be removed in time, the inflammation will subside under fomentation and the application of a leech to

the gum ; but if matter has formed it must be evacuated without delay. If the extraction of a tooth is followed by the flow of pus, the enlargement of the aperture in the socket by the introduction of a trocar is at once the readiest and simplest mode of evacuating the matter ; but if all the teeth are apparently sound, it will be advisable to perforate the alveolus above the gum with a trocar, gimblet, or strong pair of scissors, and similar treatment would be required in the rare case of suppuration occurring after loss of the teeth in old people. If it be determined to sacrifice a tooth, the first molar is to be preferred for extraction, both on account of the depth of its socket and also because, as mentioned by Salter, it is more liable to decay than the other teeth. In puncturing through the socket of a tooth with a trocar, it is well to gauge the depth to which the instrument may safely go with the fingers of the hand which grasps it, lest injury should be unwittingly inflicted on the orbital plate by the trocar entering unexpectedly, or a trocar with a stop may be employed if preferred.

After considerable experience of both methods, I prefer the puncture above the alveolus, except when a tooth obviously requires extraction, because I find that the aperture is less liable to close up than when made through the alveolus, and because food is less likely to find its way into the antrum. It is necessary, however, not to direct the trocar quite horizontally, but a little upwards, lest in a case of highly-arched palate the floor of the antrum should be injured, as I have known on one occasion, but then fortunately with no permanent damage, except the exfoliation of a minute portion of the palate.

Whatever method may be adopted for emptying the antrum, it is important that the cavity should be thoroughly cleansed by the forcible injection of warm water until it runs freely from the nostril. For this purpose an ordinary glass syringe is quite insufficient, but I have satisfactorily employed an ordinary Eustachian catheter for the purpose, to which an india-rubber injecting bottle is adapted. After a time, and with a little instruction, patients can learn to dispense with the syringe by forcing a mouthful of water through the antrum by the action of the buccinator muscles. After thoroughly cleansing, some detergent and slightly astringent lotion should be injected to restore the healthy condition of the mucous membrane, and for this purpose weak solutions of permanganate of potash or sulphate of zinc answer admirably ; but these cases are exceedingly tedious as a rule, and take many months for their

cure. If the perforation has been made through the socket of a tooth, care must be taken that particles of food do not gain admission to the antrum, and this may be accomplished by plugging the hole with cotton-wool, or, as suggested by Salter, by fitting a metal plate to the mouth with a small tube to fill the aperture, which can be corked at pleasure, and will serve as a pipe for injection.

Ordinarily the pus is readily evacuated through the nostril, but I have seen large masses of offensive inspissated pus block up the opening into the nose and require very forcible and repeated syringing for their removal, and the same thing applies to clots of blood, which occasionally give trouble. A still more serious event is when a mass of inspissated pus gives rise to symptoms closely resembling those of a tumour of the upper jaw, and without producing that absorption which gives rise to the crackling characteristic of the presence of fluid. The following case of this kind occurred in my own practice, and the late Mr. Mason published a very similar one. A woman, aged forty-three, was admitted under my care, complaining of pain and swelling of the left side of the face. There was an ill-defined swelling over the region of the left upper jaw, and the angle of the mouth on that side was drawn downwards. The swelling was both hard and tender; the skin over it appeared unaffected. In the mouth there was a tense, elastic, and tender swelling over the left half of the hard palate, displacing the alveolar process downwards. Slight discharge oozed from a small opening in the mucous membrane opposite the last upper molar tooth, the swelling being softer about this spot than elsewhere. The left nostril was blocked, its external wall being pushed inwards, and the patient complained of some discharge from it. The neighbouring lymphatic glands were not enlarged, and, with the exception of occasional pain in the tumour, the patient suffered no inconvenience, her general health being excellent.

She had noticed the swelling for about two years, and its commencement was attributed to exposure to cold. At times the swelling increased, and became more troublesome, especially after prolonged overwork. No history of syphilis could be obtained, and her family history was good.

Believing that I had to deal with a solid tumour of the jaw, I made an incision through the upper lip in the median line, prolonging it into the nostril of the affected side. The alveolus and hard palate having been divided with saw and bone forceps, a way

was made into the latter, and a pultaceous offensive mass, about the size of a hen's egg, was turned out with the finger. On microscopical examination this was found to consist of fatty *débris*, granular pus-cells, and acicular crystals. As the larger portion of the left half of the hard palate was partially loosened and absorbed, it was removed with the forceps. The cavity of the wound was stuffed with a strip of lint, and the patient made an uninterruptedly good recovery.

The possible subdivision of the floor of the antrum by bony septa, already described, must be borne in mind in operating upon this cavity, and especially if there is reason to suspect the presence of any foreign body which may be keeping up irritation. In his paper already referred to, Mr. Cattlin narrates the case of the fang of a tooth lodging in one of these subdivisions, from which it was extracted with difficulty.

Hydrops Antri, or "dropsy of the antrum," is an old name (which should, I think, be abandoned) for a disease which has long been recognised, though, within the last few years, opinions have changed as to the exact pathology of the affection. The history of these cases is one of gradual, painless dilatation of the upper jaw, until its outer wall becomes so thin as to crackle like parchment upon pressure being made, or at certain points being so absorbed that fluctuation is readily perceptible. Occasionally the other walls of the jaw yield, though more slowly, to the persistent pressure, the palate becoming flattened, and the nostril blocked by the bulging of the internal wall. On the extraction of a molar tooth and perforation through its socket, as described under the previous section, or more frequently by an incision through the osseo-membranous wall of the cyst, a quantity of clear or yellowish serous fluid is evacuated, which frequently contains flakes of cholesterine floating in it. After the evacuation of the fluid the swelling ordinarily subsides, the maxilla resuming its normal relations, and the opening closing.

The old explanation of these phenomena was that the aperture between the antrum and the nostril having become accidentally obstructed, the mucous secretion, which was presumed to be constantly taking place within the cavity, was thought to be imprisoned, and, by its gradual accumulation, to produce the symptoms which have been described. Following up this idea, we find surgeons, and among others Jourdain, of Paris (1765), who very accurately described the affection, recommending the restoration of the nasal

orifice by probing—a useless operation, still described in many foreign manuals of operative surgery. Bordenave, in his *Observations on Diseases of the Maxillary Sinus* (Sydenham Society's translation, 1848), gives full details of this method of probing and injecting, but, after showing that there is great difficulty and uncertainty in finding the natural orifice, remarks that "there are

Fig. 6.

very few cases in which the employment of injections through the natural openings, in the manner above described, would effect a complete cure." It is certain, however, that some of these cases, and very probably all of them, originate in the growth of a cyst or cysts within the antrum, or more commonly in the wall of the antrum, which either grow to such a size as to be mistaken for the cavity of the antrum when opened, or break into the antrum by absorption of the cyst-wall, so that on subsequent examination no evidence of cyst formation can be discovered. This explanation is, as pointed out by Coleman, supported by the fact that in these cases of so-called hydrops antri the contained fluid in no respect resembles ordinary mucus, but is invariably a clear, more or less yellow, fluid, frequently containing cholesterine in considerable quantity. In these respects it closely resembles that found in well-marked cases of cystic growth, which have been examined in various stages of development.

A remarkable case of distension of the antrum is narrated by Sir William Fergusson, and I am able to show you the preparation, which is preserved in the King's College Museum. It was taken many years ago from a subject in the dissecting room, and from the person of an old woman. The tumour, which was of very large size, had burst shortly before death, leaving the remarkable deformity shown in Fig. 6, which is due to the complete absorption of the front wall of the antrum and its collapse, by which a prominent horizontal ridge of bone, formed by the upper wall of the antrum, has been left immediately below the orbit. The preparation shows great distension of the antrum, the diameter of which varies in different parts from two to two and a half inches, and the bony wall is so thinned out as to resemble parchment. The gums are edentulous. There is no communication between the nose or mouth and the cavity, which is lined with a membrane covered with laminated deposit. Whether this was originally a case of cystic growth, or a chronic abscess, it is impossible now to decide, but it is, so far as I am aware, a unique *post-mortem* specimen of this distension.

(*To be continued.*)

Reg. v. The General Council of Medical Education and Registration.

QUEEN'S BENCH DIVISION. Before Mr. Justice MATHEW.

JUDGMENT was delivered on Wednesday morning in this case, which was an application on behalf of Mr. H. F. Partridge, for a *mandamus* ordering the General Council of Medical Education of the United Kingdom to restore the name of Mr. Partridge to the register of dentists, kept under the Dentists Act, 1878. The rule was argued last sittings before Mr. Justice Mathew and Mr. Justice A. L. Smith. Mr. Justice Mathew, in delivering the judgment of the Court, said that the applicant had, since 1867, practised in the metropolis as a dentist, and it was admitted that when the Act passed he would have been entitled to be registered as a dentist if an application had been made by him in accordance with the provision of Section 7. He had not, however, applied for registration in respect of this qualification. In 1878 he obtained from the Royal College of Surgeons, Ireland, a diploma in dentistry, and as a licentiate of this body, which was one of the medical authorities referred to in the Act, he applied for and pro-

cured registration under the statute (Section 6). The diploma had been granted on the terms that the holder should not seek to attract business by advertising, or by any practice considered by the College unbecoming, and that the diploma might be cancelled on its being proved to the satisfaction of the President and council that he had done so. In the year 1883, the Royal College of Surgeons of Ireland, upon the ground that Mr. Partridge had advertised for business, cancelled his diploma, and thereupon the General Council directed his name to be erased from the register. Section 11 contains provisions as to the corrections to be made from time to time in the register, and it was argued for the General Council that, where the original qualification no longer existed, the Council were bound to correct the register and erase the name. It was argued for the applicant that the name of a person qualified either by practice or diploma, and once properly placed on the register, could only be erased in the manner and upon the grounds specified in the statute. It was urged that the mere fact that the diploma had been cancelled by the medical authority which had granted it was not a ground upon which the General Council was justified in disqualifying the applicant, or exposing him to the penalties imposed by the Act upon unqualified practitioners. We are, continued Mr. Justice Mathew, of opinion that the contention of the applicant is right, and that he is entitled to have his name restored. (His lordship here read Section 13, and also referred to Section 15.) It appears to us that, in such a case as the present, the Medical Council possessed no further powers of dealing with the register than those conferred in the Sections referred to. It was admitted that the Council had not decided that Mr. Partridge had done anything to justify the removal of his name under Section 13, but had considered that it was bound to erase his name when the determination of the medical authority granting his diploma had come to its knowledge. This is a course which, it seems to us, they were not entitled to adopt; otherwise, where a medical authority has withdrawn a diploma on the ground, for instance, that a particular theory of dental surgery had been adopted or discarded, the name of the holder must be struck from the register. But this is a ground upon which the General Council, under Section 13, is expressly prohibited from erasing a name. The third clause of Section 13 appears to show that the Council was not intended to be bound by any determination of the medical authority, even with respect

to the grounds for erasing a name specified in Section 13, but was required to adjudicate independently. This view is strengthened by an examination of the provisions in the last clauses of Sections 13 and 14. The Act clearly appears to be framed to restrict the right of the General Council to interfere with registered dental practitioners in the practice of their profession to the cases where there are the graver reasons for disqualification specified in Section 13.

The rule for a *mandamus* was accordingly made absolute, but, on an application on behalf of the Council, was ordered not to be drawn up for a week.

Mr. Finlay, Q.C. ; and Mr. Lyon were for the applicant ; and Mr. Kennedy, Q.C., and Mr. Muir Mackenzie for the Council.

Death from Chloroform and Fear.

AN inquest recently held at University College Hospital on the body of a woman forty-one years of age, opens up two important questions bearing upon the administration of volatile narcotics under special circumstances of disease. The patient had suffered from pleurisy, followed by effusion of serum into the left pleural cavity, and the operation to which she was subjected was that of tapping the chest in order to draw off the fluid. The needle was inserted, but as the fluid did not flow it was proposed to tap at a point lower down. To quiet the anxiety of the patient, who had become nervous, and who asked for chloroform for the second puncture, chloroform was administered, but before the quantity put into the inhaler—about two drachms—was used up, the pulse stopped and death followed. In order to give a chance of recovery, the fluid was drawn off from the chest, and the other usual means of restoration were supplied, but without avail. The post-mortem showed the heart to be fatty and empty, and death was returned as from syncope under chloroform. The two practical questions in connection with this untoward event are :—(1) Is it extra hazardous to administer an anæsthetic when a pleural cavity is charged with fluid? (2) Is it extra hazardous to administer an anæsthetic like chloroform after a patient has expressed fear or anxiety during an operation? In answer to the first question, we should infer—although the matter has, we admit, been little argued—that in all cases where the capacity of the chest is reduced by effusion of fluid or other cause, there is some extra

risk, and that in such cases local anæsthesia is the safest method. On the second question we have less doubt. We believe, as we before expressed in these columns, that it is always an extra risk to administer chloroform when a patient is becoming faint or nervous from fear. Chloroform acts on the heart like fear, and had better be avoided when nervous trepidation leading to faintness is present. We do not for a moment say that this patient would not have died under any other method of anæsthesia, or that she might not have died if no anæsthetic had been employed. But in the future it may perhaps be preferable, guided by the experience here afforded, not to administer chloroform under any persuasion of the patient, when, with reduced capacity of respiration from mechanical impediment, there is nervous shock and threatened syncope from fear.—*Lancet*.

ANNOTATIONS.

AN interesting discussion took place at the recent meeting of the Eastern Counties Branch (see p. 397), upon the appointment of dental surgeons to local hospitals and infirmaries. The meeting was very much divided, and eventually a resolution in favour of such appointments was defeated by a majority of one. It is a question of importance, but we feel that it is one upon which the provincial representatives of the Association should be heard first, before we venture an opinion, and we think it would be well if the question were thoroughly threshed out in our correspondence column by those who hold opposing views. The arguments, pro and con, can be carefully weighed and considered in print, and the ventilation of such matters is one of the great aims of professional journalism.

WE publish on another page a letter from Mr. Bullin of Chester, in which he takes great exception to the tone and manner of our editorial criticism upon his address. Mr. Bullin's position as President of one of our great Branches entitles him to respectful treatment at the hands of all, but especially at the hands of the Association Journal. It was, therefore, with great reluctance that those to whom the Association has delegated the work of producing the Journal, decided that the address had so seriously impeached the conduct and motives of our old

leaders, and so ridiculed our reform and depreciated the results of the long struggle of the last thirty years, that the strongest possible remonstrance was called for. It seemed to us to revive the bitter faction fights of the days before all differences were sunk, and all joined hands for the common cause in 1862. There are some of us who still carry scars of those old contests, and regard with a very jealous eye the unity of our profession ; and those who utter words that tend to divide the younger generation into rival camps once more, and who sow the seeds of more bitter controversy, must be prepared for unsparing criticism. The diploma of licentiate has never had stauncher supporters than ourselves, but we cannot see the wisdom of endeavouring to attach a stigma to the possession of the membership of the College, nor do we know what good end is served by assuming that these two diplomas must necessarily be engaged in bitter strife and rivalry.

MR. BULLIN proceeds to explain that he has hitherto believed the Journal to be the common property of the members of the Association ; and so it undoubtedly is, and for this very reason those who have been entrusted with its management endeavour before all things to represent the views of the Association, and do not feel that their duty to that body permits them to leave unspoken a strong word of remonstrance when the whole conduct of the reform movement, including the establishment of the diploma and the passing of the Dentists Act, is impugned, and the most pitiful motives attributed to those who conceived and carried out the movement. The suggestion that a small minority of London members who hold a double diploma, abuse their opportunities of access to the editorial columns of the Journal to intimidate and silence their brethren who differ from them, involves the gravest accusation against the staff of the Journal one and all, and requires more proof than Mr. Bullin advances. Because we, with great reluctance and after much consideration, felt it our duty to express strong disapproval of his views, he has not hesitated to question our integrity as trustees and our honour as gentlemen. Mr. Bullin mentions that the address was "to the younger members of the Midland Branch." We did not understand this limitation of his audience, but accepting his limitation, it becomes ten-fold more important that such an audience should not listen to what we regard as a one-sided account of our history without a word of correction.

Some of the most active of our executive, as well as many who in their well-earned repose are ever ready with advice and guidance, were prominent figures in the College of Dentists, and took possibly a better remembered if not more efficient part in the deliberations of that body than Mr. Bullin himself, and are perhaps as well acquainted with its history ; and the younger generation, notwithstanding Mr. Bullin's depreciatory view of their motives, have been bred up in the old traditions of self-sacrifice for the common cause, and while we shall never, we hope, be afraid to say we are sorry for having caused pain, neither shall we ever flinch from criticism that seems called for, even if the task of criticising be an unpleasant duty.

LASTLY, we would point to the fact that a contemporary journal has produced almost simultaneously with ourselves a severe stricture upon the address. 'The *British Journal of Dental Science* takes a very similar view of the situation to that taken by the Journal of the Association. Before, however, we leave this subject, we wish to state emphatically that the chief evil which might arise from the address, is one which we believe Mr. Bullin would regret as deeply as ourselves. This evil is nothing less than a sense of friction between those of us who hold a double diploma and those who do not. The virtues of courtesy and common sense do not belong exclusively to either class, and while we claim that knowledge of surgery of any sort can never come amiss to any one who deals with living structures, we maintain that the long and carefully thought out curriculum required for the licentiatehip, is sufficient to turn out accomplished professional gentlemen of whom the most dignified of callings may well be proud. Lastly, with regard to our connection with the College of Surgeons, we think that thereby we have the advantage of those countries where our science is a separate institution with an independent board of examiners. We do not think any good end can be served by reopening this long settled question, but if our readers think otherwise, our columns are open, and we shall endeavour to meet their arguments to the best of our ability.

OUR readers will be interested to learn that a Scientific Exhibition will be connected with the Sixtieth Congress of German Naturalists and Physicians, to be held in Wiesbaden from the 15th to the 24th September 1887. It will be strictly scientific,

not mercantile, and, as its purpose will be to show at a glance the latest and most perfected instruments and apparatus, which have been placed at the disposal of science and medicine in the last few years, anything that cannot lay claim to be ranked in this category will be rigorously excluded. No charge whatever will be made for space, insertion in catalogue, or anything else in the exhibition, and the instruments, while there, covered against risk by fire at the expense of the Committee. The following groups will form part of it:—1. Surgery, physical diagnosis and Therapeutics. 2. Ophthalmology. 3. Gynaecology. 4. Laryngology, rhinology and otiatry. 5. Orthopaedia. 6. Dentistry. 7. Chemistry. 8. Instruments of precision, with subdivision for Microscopy. 9. Instruments and apparatus aiding instruction in natural history. 10. Geography. 11. Equipment for scientific travel. 12. Photography. 13. Anthropology. 14. Biology and physiology. 15. Hygiene. 16. Electro-therapeutics and neurology. 17. Pharmacology. Applications are to be addressed to the *Ausstellungs Committee*, der 60, *Versammlung Deutscher Naturforscher und Aerzte*, 44, *Frankfurterstrasse*, Wiesbaden, where also further particulars can be obtained.

THE Annual Meeting of the American Dental Society of Europe, will be held at the Hotel zum Riesen, Coblenz, on Thursday, September 1st, 1887, at 10 a.m., and continue for two or three days. Executive Committee—E. P. George, B. Cohen, N. S. Jenkins. The work has been divided this year into sections, and reports will be presented as follows:—1. Operative dentistry. 2. Dental Materia Medica. 3. Prosthetic dentistry. 4. Dental education. 5. Dental pathology and histology. Clinics illustrating various methods of operating may be expected. There will be an exhibition of instruments and of models and appliances for plate work and regulating cases. Gentlemen who design contributing papers and who have not already sent in the titles of their essays are requested to communicate them to E. P. George, 5, Marien Street, Frankfort a/M.

WE hear that the new water motor for the dental engine, "The Hastie," which we have already noticed, is gaining ground at Glasgow. Mr. Brownlie has applied it to an engine, which swings in front of his chair. The engine being attached to the wall at the side of the window, is capable of universal

application. The starting and rate of speed are governed by a couple of buttons in the floor at the operator's foot. The cut off is instantaneous, so is the start. Mr. Brownlie finds the appliance a great comfort, and as many (we might say all) of our fellow practitioners must be interested in the details of so convenient an apparatus, we are glad to say that Mr. Brownlie has authorised us to inform our readers that he will be pleased to afford all visitors to Glasgow at the annual meeting an opportunity of seeing the engine in action. However ingeniously a hydraulic engine may be constructed, the continuous and plentiful supply of water will ever be the primary condition to success. In this particular the city of Glasgow is specially favoured, its water supply from Loch Katerine being not only continuous, but of sufficient pressure to afford a very strong power even at the top of the highest tenements.

THE annual distribution of prizes at the London School of Dental Surgery, will take place on July the 21st, at the rooms of the Medical Society of London, Chandos Street, Cavendish Square. A *conversazione* will be held to give additional interest to the proceedings. Mr. S. Cartwright (Treasurer of the School) and Mr. George Gregson (Chairman of the Medical Committee), will receive guests at 8.30. At nine o'clock Professor Marshall, F.R.S., Chairman of the General Council of Medical Education, will distribute the prizes and certificates to the successful students. Music will be provided at 10 o'clock, and Mr. Eric Lewis will give a musical sketch.

MR. W. BOWMAN MACLEOD, of Edinburgh, has been elected one of the Vice-Presidents of the Dental and Oral Section of the Ninth International Medical Congress.

THE following series of lectures and demonstrations will be given in the Dental Hospital, Chambers Street, Edinburgh, in connection with the Medical Post Graduate Course, 1887. Tuesday, 27th September, "Dental Operations with and without Anæsthetics," by Mr. Andrew Wilson and Mr. G. Stewart Durward; Friday, 30th September, "Demonstrations in Administration of Nitrous Oxide Gas," Mr. Durward; Tuesday, 4th October, "Demonstrations of the use of Cocaine in Dental Surgery," Mr. S. W. Watson; Friday, 7th October, "Demonstration of

Appliances used in the Treatment of Fractured Lower Maxillæ," Mr. Amoores; Tuesday, 11th October, "Diseases of the Dental Pulp, their Pathology and Treatment," Mr. Watson; Friday, 14th October, "Operations with and without Anæsthetics," Mr. Wilson and Mr. Durward.

EDINBURGH DENTAL HOSPITAL.—The quarterly report of the Edinburgh Dental Hospital shows that the total number of patients treated at that institution from April 1st to June 30th, is 1899. Of these, 614 were males, and 715 females; 75 cases were treated under anæsthetics, and 495 stoppings were inserted.

IN preparing the new Post Office Directory for Glasgow published in June last, the Council of the West of Scotland Branch were successful in getting the names of three men, not on the Dental Register, removed from the list of dental surgeons. There has been no increase in the number of dentists in practice in Glasgow during the past year, the total being seventy-one.

IN our last number (June), p. 375, we noticed the gas apparatus of Dr. Freeman, and wrongly described him as R. J. Freeman, his correct initials being R. T. Freeman.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The Board of Examiners in Dental Surgery report to the Council that thirteen candidates were admitted to examination in dental surgery at the examination for the licence concluded on the 10th of June, 1887; that of those candidates ten passed, and three were referred to their professional studies. The Board accordingly recommend that the licence in dental surgery be issued to the candidates whose names are included in the following list, viz:—James Battersby, 90, Market Street, Droylsden, Manchester; Alfred Parker Cater, 16, Clifford's Inn, Fleet Street; Abraham William Frost, North Hill, Colchester; Percy Allison Linnell, Edge Lane, Stretford, Manchester; Robert James Lovitt, 10, Well Road, Hampstead; Charles Frederick Newton Petit, 28, Camden Street, Oakley Square, N.W.; Thomas George Read, 31, Cavendish Square, W.; Charles Cecil Robinson, 3, Broadway, Streatham; James Francis Rymer, M.R.C.S.E., Pevensey, Croydon; George Seymour, 41, St. Augustine's Road, Camden Square.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—At the Examination for the Fellowship in April last, R. Denison Pedley, L.D.S., M.R.C.S.Eng. was duly elected Fellow.

A NEW route to the West of Scotland has been opened up by the Carron Company line of steamers running between London and Grangemouth on the Forth and communicating with Glasgow from thence by train. Those of our members who joined the water party arranged by the Scottish Branch of the Association when the Annual Meeting was held in Edinburgh may remember the enjoyable sail between Leith and Queensferry. The new line of steamers passes over the same ground, and the passengers have thus an opportunity of seeing the Forth Bridge which has been pushed rapidly forward since our visit three years ago. Particulars regarding this new route may be obtained on application to the Carron Company, London and Continental Wharves, Lower East Smithfield, London, E., or at 16, Mark Lane.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

Dentists and Juries.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I believe it is not generally known in the profession that dentists may be called upon to serve on juries, and for the benefit of those who have no desire to act in that capacity, I beg to say that if any names were put on the Jury list before the passing of the Dentists Act, and no application has been made for their removal, that they are liable to be called upon to serve. A list is prepared every summer by the Overseers, to whom all applications, where a claim to exemption exists, should be made. If you will kindly insert the above in your next Journal, you will greatly oblige,

Yours respectfully,

Warrington, June 23rd, 1887.

JOHN TAYLOR, L.D.S.

The Address at Chester.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—The literary and scientific sensation in the dental world for this jubilee year of 1887 was reserved for the members of the Midland Branch of the British Dental Association, and has now been presented

to those of us who were not privileged to visit the ancient city of Chester, on April 29th, in this year of grace. Need I say that I refer to Mr. Fred. Bullin's extraordinary address on his assumption of the presidential chair?

To say that it covers such an enormous quantity of ground that one becomes bewildered and lost; or that the literary, scientific, educational, social, political and commercial aspects of the profession are each broached in turn, gives but a faint idea of the constitution and scope of the address. No one can complain of want of variety, when the subject matter ranges from a vivid description of a traveller crossing the Atlantic "with quite a cargo of *the* well-known artificial teeth," to a long extract from the libretto of a comic opera. As to the merits of Mr. Bullin's disquisition on the relative value of diplomas, I make no comment; but he has given us three cases out of an imaginary case-book—presumably his own—which from more points than one are of more than passing interest. Let us briefly examine them.

CASE I.—A molar, whose pulp is diseased, and its fangs embedded in an alveolar abscess. Treatment in four stages—*reduction* of abscess, removal of diseased pulp, treatment of cavity, and filling of tooth.

Will Mr. Bullin kindly inform his more ignorant brethren what operation is meant by *reduction* of *abscess*, and whether he has met with many cases of alveolar abscess, where the pulp was present *diseased* or otherwise?

CASE II.—An alarming case of hæmorrhage after extraction of tooth, which cannot be controlled by styptics or plugging. Speedy cessation on application of hastily constructed *denture*.

Will Mr. Bullin kindly explain? One always thought a *denture* was a base-plate carrying artificial *teeth*. Did the pressure of the plate stop the bleeding?

CASE III.—Severe comminuted fracture of superior maxilla. Treatment by a vulcanite *denture*. Complete repair by "ossification."

This a pathological point of much interest. Has Mr. Bullin seen many cases of bony repair in the upper jaw? If so, could he not arrange for one or two post-mortem specimens for the museum of the Royal College of Surgeons? They would be much valued.

Your obedient Servant,

A PUZZLED L.D.S., M.R.C.S.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—I read the acidulous and pugnacious strictures on my address to the younger members of the Midland Branch of the British Dental Association, which appeared in the June number of your Journal, with feelings of pity for the writer. To try "to sit upon" those who differ from you may be, in the absence of valid argument, a rough and ready way of silencing legitimate discussion, but the method reflects

no credit on those who resort to it, while it hinders rather than promotes the interests concerned. Your having taken refuge in sarcasm instead of argument is, to my mind, and that of many L.D.S. friends, a sure token that you are afraid to have the subject-matter of my address fairly discussed.

Until June, 1887, I was under the impression that the BRITISH DENTAL ASSOCIATION JOURNAL was "ours," that in part it belonged to every member of the British Dental Association. I was not before aware that the small minority of members in London holding surgeons' degrees in addition to the dental, held preference shares in the property, with a consequent right to use the editorial columns for the purpose of intimidating and silencing their fellow members who happen, in the interests of the whole profession, to express sentiments differing from theirs. You must pardon my ignorance, but from the number of letters I am daily receiving from English and American correspondents I learn that I was not alone in my ignorance. I was even simple enough to believe, when assured, that "the Association of Surgeons Practising Dentistry" had ceased to exist, but your article clearly proves that if it has ceased to exist *in name*, it exists *in fact*; that it is full of energy, ready to pounce upon any L.D.S. who dares to entertain and express the opinion that the dental profession collectively would prefer to manage their own affairs, rather than have them mismanaged by the Medical Council.

I pass over in silent disdain your libel on the honoured dead, and several eminent men still living who assisted in forming the College of Dentists, and fearlessly challenge you to test the opinion of the entire profession of this country on this subject, which should have been done before 1859. If this wise and just course had been adopted the evils we complain of to-day would not have existed; to quote a remark contained in a letter I received a few days since from an eminent correspondent, "our position would at least have been more dignified, the refulgence would not have been a borrowed light easily taken away, and with the constant reminder that it is so."

I am yours truly,

June 30th, 1887.

FRED. BULLIN.

Fees to Medical Men.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Uniformity of custom as to inter-professional fees—if desirable—may, perhaps, be soonest attained by according at present individual liberty on the point to dental practitioners. This sanction for private judgment, by disavowing any recognised etiquette, should be held to justify equally those who accept or decline an immediate consideration for services to members of their own or a kindred profession.

An authoritative ruling, in either sense, might prejudice the development of the specialty and its relation to medicine.

Even those who most strongly feel that in general the benefits of the highest skill cannot be assured without some recognition of the time and laborious attention the best work demands, will deprecate premature insistence on the point.

The enthusiastic highly-qualified young dentist, who, not yet overwhelmed by practice, feels privileged to give of his skill to medical colleagues, does the whole profession a great service, whatever his private motives may be. For undeniably, medical men, hitherto, have not personally resorted to the best trained medical skill ; the experience and technical knowledge underlying which have arisen outside of ordinary medical teaching and literature. The general practitioner has usually been acquainted with but one aspect of dentistry, his own collaboration being limited to extractions, with visions beyond. Consequently, the comparatively few skilled, reputable operative dentists, fully employed, but not overpaid, knowing that already the demand by better-informed medical men for the best work exceeds the supply, have not cultivated with much alacrity personal relations which upon the basis of "reciprocity of services," would place them at a grave economic disadvantage.

It may be confidently predicted, that quite apart from sentiment, individual interests and honesty will be promoted by recognizing the immense difference in the economic value (as distinguished from the purely professional or scientific value), between totally distinct kinds of services ; and when one member of society requires of another more than mere advice or nominal service, he should indulgently estimate *time* occupied in highly *skilled labour* by at least his own standard of its worth.

W. H. C.

International Medical Congress.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Through no fault of mine I have little to add to my previous communication. The authorities on the other side seem to have been unable as yet to make efficient arrangements, and the paucity of notices in the best-informed American Medical Journals is extremely noticeable. Special travelling rates within the United States will probably be arranged in time for notice in your next issue. Meanwhile, the great feature is likely to be a visit for the foreign visitors to Niagara and return to New York after the Congress.

In the absence of any special arrangements with the Transatlantic lines beyond the special rate of the Inman line and the 10 per cent. discount of the Cunard line, the best plan would seem to be to form a party of members of the British Dental Association and their friends, when any company would be more or less amenable to negotiation

according to the strength of the party. The choice would be between a steamer on Saturday, August 20th—which is the great sailing day from Liverpool, and all the best ships run—and the slower boats on Tuesday, August 23rd, when the party might either go direct to New York by the Inman line or to Boston by the Cunard, and yet be in time for the Congress on September 5th, at Washington.

I would undertake negotiations on behalf of all who express a wish to join, provided they inform me of their preference as to route and day of sailing as above, within a week of the issue of the next number of the Association Journal. With regard to hotel accommodation in Washington, the Arlington will be the head quarters of the Dental and Oral Section—terms three dols. and four dols. according to the floor. This includes all meals. A reliable correspondent in Washington strongly recommends the St. James' Hotel, at the corner of 6th St. and Pennsylvania Avenue, opposite the Baltimore and Potomac Depôt (Railway Station), as an excellent house on the European plan, where the rooms will cost about one dol. per night. He offers to ensure comfortable quarters for our party. This latter arrangement seems the most feasible and most economical. Dr. Abbott of New York, and chairman of the Reception Committee, has kindly offered to "look after" our party on arrival in New York. In the event of our party landing at Boston, a warm welcome is assured, with opportunities of a visit to Harvard University. Despite the general backwardness of arrangements, I have no doubt all will be right in the end, and I should like to know of some others going besides the readers of papers, &c.

Early arrangements will save a world of worry and trouble—*verb. sap.*

Very faithfully yours,

2, King's Parade, Cambridge,

GEO. CUNNINGHAM.

July 11th, 1887.

APPOINTMENT.

GEO. CUNNINGHAM, B.A. (Cantab), L.D.S.Eng., D.M.D., Harvard, has been appointed Lecturer on Operative Dentistry at the National Dental Hospital, *vice* St. George Elliott, M.D., D.D.S. resigned.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

DENTAL SURGERY AT THE METROPOLITAN HOSPITALS, &c.

HOSPITALS.	ASSIST. DENTAL SURGEONS.	DAY AND HOUR OF ATTENDANCE.	ADMINISTRATORS OF ANÆSTHETICS.
St. Bartholomew's...	Mr. Ewbank ; Mr. Paterson ...	Daily at 9 a.m. ...	Mr. Mills
Charing Cross ...	Mr. Fairbank ...	Monday, Wednesday & Friday, 9 a.m.	
St. George's ...	Mr. Winterbottom ...	Tuesday, 9 a.m. ...	
Guy's ...	Mr. Henry Moon ...	Tuesday and Thursday, 12.30 noon ...	
King's College ...	Mr. S. H. Cartwright ...	Tuesday and Friday, 10 a.m. ...	
The London ...	Mr. Ashley Barrett ...	Tuesday, 9 a.m. ...	
St. Mary's ...	Mr. Howard Hayward ...	Wednesday and Saturday, 9.30 a.m. ...	
Middlesex ...	Mr. Bennett ...	—	
St. Thomas's ...	Mr. Ranger ...	Tuesday, ...	
University College ...	Mr. Hutchinson ...	Wednesday, 9.30 a.m. ...	
Westminster ...	Dr. Walker ...	Wednesday and Saturday, 9.15 a.m. ...	
London Dental ...	Mr. David Hepburn ...	Monday, 9 a.m. ...	Dr. Buxton.
" ...	Mr. R. H. Woodhouse ...	Tuesday, 9 a.m. ...	Dr. Hewitt.
" ...	Mr. Gregson ...	Wednesday, 9 a.m. ...	Mr. Mills.
" ...	Mr. Storer Bennett ...	Thursday, 9 a.m. ...	Mr. Braine.
" ...	Mr. Claude Rogers ...	Friday, 9 a.m. ...	Mr. Bird.
" ...	Mr. F. Canton ...	Saturday, 9 a.m. ...	Mr. Bailey.
National Dental ...	Mr. Henri Weiss ...	Monday, 9 a.m. ...	Mr. Glassington.
" ...	Mr. Alfred Smith ...	Tuesday, 9 a.m. ...	Mr. Davis.
" ...	Mr. G. A. Williams ...	Wednesday, 9 a.m. ...	Dr. Winslow.
" ...	Mr. A. F. Canton ...	Thursday, 9 a.m. ...	Mr. Glassington
" ...	Mr. T. Gaddes ...	Friday, 9 a.m. ...	Mr. Davis.
" ...	Mr. Harry Rose ...	Saturday, 9 a.m. ...	Dr. Winslow.

MEETINGS FOR THE MONTH.

Dental Hospital of London.—Finance Committee, July 15th, at 5.30 p.m.; Committee of Management, July 18th, at 5.30 p.m.; Medical Committee,

British Dental Association.—Publishing Committee, July 28, at 5.30 p.m.

" Business Committee,

" Representative Board, August 18,

[WE RECEIVED THIS LETTER TOO LATE FOR INSERTION IN THE BODY
OF THE JOURNAL.—Ed.]

International Medical Congress.

To the Editor of the "Journal of the British Dental Association."

DEAR SIR,

Owing to the unusual attractions of Jubilee year, there is a much more than ordinary rush of homeward bound American travellers, and when to this enormous traffic is added the number of those purposing attending the Congress, it is easy to realise the difficulty in arranging a passage.

Quite a considerable party are leaving by the "Furnessia" from Glasgow on the 25th. The "Servia," a Cunard liner, leaving on Saturday, the 27th, will arrive about the same time with another party of our members on board. This and the Guion boat leaving on the same day, will afford a last opportunity for reaching Washington in time for the Congress. I believe that it is still possible to obtain berths on the "Servia."

By taking a single passage across, one is enabled to return from America by almost any route at a lesser cost than from this side, consequently the purchase of two single tickets is cheaper than taking a return ticket, even with the special reduction allowed, and gives a more extensive choice of dates for returning.

Judging from several communications received from Members of the Association, the following hints may prove useful:—

Tickets of Membership of the Congress will be obtainable at the Central Bureau in Washington, and there will be no question as to the eligibility of any Member of this Association.

On ordinary occasions a dress suit would be an almost unnecessary burden upon one's baggage, but on this occasion the consciousness of its presence in the impedimenta will enable one to fearlessly face the social emergencies of the Congress.

It may not be amiss to state that provision, in the way of clothing, should be made for both extremes of temperature, and that the expense of travelling in America will be minimised by consolidating one's baggage as far as possible in one large portmanteau; the traveller is thereby enabled to avail himself of the very excellent express system, and also thereby render himself independent of the expensive American hackney carriage extravagance.

The S. S. White Dental Manufacturing Company have kindly offered the use of their several Branches in Philadelphia, New York, Boston and Chicago, as addresses for our Members visiting the Congress. Letters so addressed will often save one a long excursion down Town to the General Post Office. The several managers have been also instructed to shew all the attention they can to our Members.

Apologising for the unavoidable lateness of this communication.

I am,
Very faithfully yours,

GEO. CUNNINGHAM.

2, KING'S PARADE, CAMBRIDGE,
August 10th, 1887.

The following notice also arrived too late for insertion in the programme of the *Annual General Meeting* to be held at Glasgow:—We learn that Messrs. Ash, Jamieson, and the Dental Manufacturing Co., will exhibit at the Meeting.

Members are reminded that their subscriptions were due in JANUARY last and are requested either to remit them direct to the Treasurer, at 40, Leicester Square, or if more convenient, to pay them through their bankers, or through the agency of one of the Dental Depots, and so save unnecessary postage, &c., in applying for the same.

We beg to call the attention of advertisers to the fact that the next (September) issue of the Journal will be double the usual size.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. 8.

AUGUST 12, 1887.

VOL. VIII.

The Coming Annual Meeting.

NOTWITHSTANDING the unusually early date of our 1887 Annual Meeting, and the number of our usual supporters who have been attracted to the Medical Congress in Washington, D.C., we have every reason to hope that the attendance at Glasgow will be equal to the average in point of numbers. That it will equal any of its predecessors in importance we quite anticipate, for already have we been promised a further consideration of the interesting subject so ably introduced at the association meetings last year by Messrs. Fisher and Cunningham, and although much of the purely professional literature will this year be exported, still, we believe that enough will remain to engage

all the time and energy which our members will have to spare from the more immediate Association business.

The preface to the pamphlet of Messrs. Cunningham and Fisher which has been contributed by Sir John Tomes, tends to widen still further the scope of the reforms which were first suggested by Mr. Gaddes, in a paper read before the Dental Section of the International Medical Congress held in London years ago, and which have since been so successfully elaborated by these two gentlemen. It is obvious that the whole scope of dental charity as it now exists, and in its future extension, was present to the mind of the author, and that, according to his views, both the poorer industrial classes and the public generally, as well as children and the servants of the State, require a more extensive form of dental aid than has hitherto been extended to them. The whole question is as large as it is important, and must be handled with that patience and perseverance which is so eminently necessary when innovations are being made on what appears the settled condition of things.

It is, however, satisfactory to observe that even since our last meeting there has been a stirring up of the public mind in relation to dental matters, and it may yet be seen that even the tactics of those who have degraded dentistry while seeking their own selfish ends, may be turned to the advantage alike of the profession and of the general public.

As time passes we must in the ordinary course of events expect inevitable changes in our executive, and resignations which were foreshadowed last year are likely now to be realised. Although such changes may make a great difference in our Representative Board, we do not believe they will in any way weaken the Association, for the same friends in council will still be available, although they may have ceased to bear the responsibilities of office.

The place of Sir Edwin Saunders will be filled by Mr. Brownlie, and thus will the presidential chair be filled by a Scotchman for a second time since the formation of the Association.

Those who remember the reception we received in Edinburgh, when Dr. Smith was our President, will be prepared for something equally good from our Glasgow friends, and if the West of Scotland weather only proves favourable, we believe that they are not likely to be disappointed.

A Few More Words of Retrospect.

IF it be true that the coming into existence of the profession of dental surgery is one of the events of the reign of Queen Victoria, it is quite as true that the science of dentistry may also be considered to have had its birth during that period. If any illustration were needed of the tremendous strides that have been made in our time in practical science there is one ready to our hand—a glance at Messrs. Ash's or Messrs. S. S. White's catalogues will bring vividly before us what kind of progress has been made in these fifty years.

The greatest events, from the workroom point of view, have been the introduction of mineral teeth and the invention of vulcanite, and these may safely be said to have revolutionised mechanical dentistry. In the surgery, to pick out a few most notable instances from the many from which we have to choose, we may point to the extracting forceps (vice the "key" superseded), the dental engine and the rubber dam, and we should be ungrateful did we not mention that the last of these boons came to us from across the Atlantic. Upon the vexed question of the patenting of the engine we do not propose to enter, seeing that it has

been so recently discussed in these columns ; the superiority of the forceps was, we believe, originally demonstrated by Mr. Tomes.

In the regions of abstract science a great deal of good work has been done, and still more that is indifferent or bad. In this connection, more, perhaps, than in any other, we find ourselves indebted to Sir John Tomes. It is to him we owe the true account of the development of the teeth, and the overthrow of the groove and papilla theories of Goodsir, and these early investigations have been pursued in various directions by Mr. Charles Tomes, and quite recently the older theories which had been not only rejected but almost forgotten for years, have been at last dislodged from the current handbooks on anatomy, Gray and Quain having at length undergone revision in this department. Of all Sir John Tomes' discoveries in dental anatomy we are, however, inclined to lay the most stress upon his account of the true nature of the dentinal fibril. He not only observed for the first time that it consisted of soft protoplasm, but hinted at its possible trophic and æsthetic functions. Moreover, as long ago as 1839, Naysmith, writing of "Mr. Tomes, the latest labourer in this field of enquiry," quotes him as unwilling to deny that even the enamel was without a connection with the circulating fluids. The now generally accepted view of the nature of dental caries is a more recent addition to our knowledge, seeing that it was first enunciated by Messrs. Underwood and Milles in 1881.

The literature of our profession has been enriched by such contributions as Owen's "Odontography," Tomes' "Dental Surgery," and C. S. Tomes' "Dental Anatomy," and during this eventful period dental science has found a voice in the shape of a periodical literature.

In whatever direction we look there is great and substantial progress to be recorded, but all the scientific events

of these fifty years, many and great though they be, are completely overshadowed and dwarfed by one great record which we need hardly hesitate to pronounce almost the greatest boon that genius has ever conferred upon the human race. It was during the early portion of the present reign that an American dentist, Dr. Horace Wells, first employed an anæsthetic (nitrous oxide gas) to render painless a dental operation. It is almost impossible to imagine now-a-days what was the daily tale of horror that attended the routine of a hospital surgeon before the days of anæsthesia. We are hardly grateful enough for the boon because we have grown so accustomed to it, but it is well at times to ponder over the terrors of the operating theatre before the discovery made by this American dentist, that we may not forget the deep debt of gratitude that we as a generation owe to the discoverer, and especially should the purely surgical department of the medical profession bear well in mind to whom they owe this discovery; that it was a dentist who taught them the mystery of artificial anæsthesia, and that if the lay public had to choose from among all the boons which the healing science has conferred upon the human race, this discovery by an American dentist may not unreasonably claim a foremost place.

Our last word shall be one of congratulation to the two veteran leaders of our profession, who at the close of their long period of active service have received at the hands of Her Majesty the well-earned honour of knighthood, Sir Edwin Saunders and Sir John Tomes.

Want of space forbids us to enlarge as we should wish upon the interesting topic of our past history, but we close the record with a sense that our progress may fearlessly challenge comparison with that of any other science. We cannot peer into the future, but if the generation that is growing up around us do as well as that which is on the

eve of passing away, we shall never have cause to be ashamed of our calling, and it will be long before the dental surgeon forfeits his claim to the respect and esteem of his fellow-men.

ASSOCIATION INTELLIGENCE.

Programme of the Annual General Meeting.

THE Annual General Meeting of the Association will be held in the Hall of the Faculty of Physicians and Surgeons, 242, St. Vincent Square, Glasgow, and in the Dental Hospital of Glasgow, George Square, Glasgow, on Thursday, Friday and Saturday, August the 18th, 19th and 20th, 1887.

The following will be the order of proceedings :—

THURSDAY, AUGUST 18th.

9 a.m. Meeting of the Representative Board in the Library of the Physicians and Surgeons of Glasgow.

10.30 a.m. The Annual Meeting for business (open to Members only) will assemble in the Hall of the Faculty of Physicians and Surgeons. *At the termination of the Association business the Meeting will be open to Visitors.* SIR EDWIN SAUNDERS will deliver his valedictory address.

Mr. J. R. BROWNLIE will take the Chair and deliver an Address.

LIST OF PAPERS PROMISED.

"On the Water Pressure to be obtained in all towns in Great Britain and Ireland of above 10,000 inhabitants, with remarks in reference to the use of the Hastic Motor in Workrooms and Surgeries," by WALTER CAMPBELL, Esq., L.D.S.Eng.

"On a More Efficient Method of Conferring Dental Appointments," by GORDON JONES, Esq., L.D.S.I.

"On the Dental Aspect of Public Health," with a view to a discussion on the progress of the question raised by W. M. FISHER, Esq., S.Eng., and GEORGE CUNNINGHAM, Esq., L.D.S.Eng., D.M.D.

"De-

"On the Mechanical Training of the Dental Student," by GEORGE CUNNINGHAM, Esq., L.D.S.Eng., D.M.D. Harvard.

"On the Value of Antiseptics in Dental Surgery," by E. LLOYD WILLIAMS, Esq., M.R.C.S., L.R.C.P.Lond., L.S.A., L.D.S.Eng.

"On the Application of Electricity to Dental Uses," by A. KIRBY, Esq., L.D.S.Eng.

1 p.m. Adjournment for Luncheon.

2.30 p.m. Reading and Discussion of Papers.

5.30 p.m. Adjournment.

8.30 p.m. The President and Mrs. Brownlie will receive the Members of the Association and their Friends at the St. Andrew's Hall, Berkeley Street, Glasgow. Music.

FRIDAY, AUGUST 19th.

10 a.m. The Annual Meeting of the Dental Benevolent Fund in the Hall of the Faculty of Physicians and Surgeons, Glasgow.

11 a.m. The reading and discussion of papers will be continued.

1 p.m. Adjournment for Luncheon.

2.30 p.m. Demonstrations and Exhibition of Instruments in the Dental Hospital of Glasgow.

6.30 p.m. The Annual Dinner of the Association will take place at the Grand Hotel, Charing Cross, Glasgow. (See Special Notices below.)

LIST OF DEMONSTRATIONS PROMISED.

Continuous Gum Work with any Form and Make of Tooth, by JAMES CUMMING, Esq., L.D.S.Glasgow.

Electric Mallet and Engine, by A. KIRBY, Esq., L.D.S.Eng.

New Articulator, by A. HOWARTH, Esq., L.D.S.Eng.

Treatment of Abscessed Teeth, and their ultimate healthy retention in the jaw, by GORDON JONES, Esq., L.D.S.I. To be demonstrated in the different stages on a number of patients.

SATURDAY, AUGUST 20th.

A special train will leave Queen Street for Dumbarton at about 9.30 a.m., conveying those who wish to visit the shipbuilding yard of the Messrs. Denny, one of the most complete on the Clyde. After viewing the works, the Members of the Association and their friends will become the guests of the West of Scotland Branch on board the saloon steamer, "Shandon." The steamer will visit some of the best of the Loch scenery on the Clyde, and luncheon will be provided on board. The return journey will be timed so as to enable members to catch the evening trains, south and north. Railway tickets, return, first-class, 1s. 7d.

The above arrangements may have to be altered according to the time at the disposal of the Committee.

SPECIAL NOTICES.

No reduction can be made in railway fares.

If those Members of the Association who are going can arrange to leave

London by the train leaving Euston at 10.10 a.m., on Wednesday, 17th August, and can send their names to the Hon. Secretary, stating class they intend to travel, carriages, &c., can be secured for them.

The price of the Ticket for the Annual Dinner is One Guinea, which includes wine, and may be obtained of REES PRICE, Esq. (Hon. Sec. West of Scotland Branch), 163, Bath Street, Glasgow.

All Members attending the Meeting are requested to sign their names in the book provided for that purpose, at the entrance to the Hall of the Faculty of Physicians and Surgeons, Glasgow.

Subscribers to the Benevolent Fund and others are requested to attend the Annual Meeting of the Benevolent Fund.

MORTON SMALE, *Hon. Sec.*

The principal Hotels in Glasgow are the "St. Enoch" (Midland), and "Central Station" (London and North Western); the "Grand," at Charing Cross; the "George," in George Square; the "Bath" and the "Alexandra," in Bath Street (close to the Faculty Hall); the "Cockburn" and the "Waverley" (Temperance Hotels).

Sir John Tomes' Preface to the Fisher and Cunningham Pamphlet.

MR. FISHER and Mr. Cunningham delivered, as our readers will remember, important papers last autumn, on kindred subjects relative to the providing of efficient dental supervision in the army and navy, and in schools and other public institutions. Our readers are already in possession of these excellent papers. It has, however, been considered advisable to issue them in a compact form to a large number of persons outside the profession, in order to awaken a more general interest, and to spread a better understanding of the question among the general public. With this object in view, the papers have been reprinted in pamphlet form, and Sir John Tomes has consented to lend the weight and influence of his name to the production, by writing a preface to it. The rigid economy which those who have been entrusted with the purse of the Association, feel bound to exercise on its behalf, would not permit the needless extravagance of again issuing the papers to the profession who already possessed them. At the same time, the committee felt that they could not deprive the members of the opportunity of perusing the preface. We therefore have thought that the simplest solution of the difficulty was to print the preface in this issue of the journal.

PREFACE.

Near upon fifty years ago a successful master of great commercial undertakings remarked to me, "dental surgery

has now sufficiently advanced in utility and in public estimation to render it quite worth following as a profession." At this time there were a limited number of practitioners of education and well-earned eminence, others of humbler educational rank, and a strong contingent of advertising dentists. Then there was no prescribed dental education, each person who would be a dentist had to learn the science and art with the assistance of a teacher or a master, or by the exercise of his own powers of observation in the conduct of such practice as came within his reach. The newspapers teemed with the advertisements of dentists who promised to save all decayed teeth by means of the new remedy then called mineral succedaneum, a name given for advertising purposes to an amalgam of mercury and copper. The teeth into which this substance was introduced speedily assumed a blue-black colour, due no doubt to the staining powers of the copper. Though disfigured in colour the tooth substance was hardened and preserved in those cases which by good luck happened to be fitted for such treatment. In other cases a raging toothache soon followed the insertion of the succedaneum. The preservative influence of the amalgam in the more fortunate cases, and the publicity given to its use, led persons in numbers to seek for the first time the aid of competent practitioners, who dissatisfied with unsightly results sought for similar plastic substances free from the discolouring property, and soon found them in other metallic compounds. Public attention having been directed to the subject, the number of practitioners rapidly increased, for in the words of my friend, dental surgery became worth following as a profession; and amongst the followers were, though at first in a sad minority, a sufficient number of suitably educated persons to ensure an ever-increasing amount of knowledge and skill. From that day to this, each year has brought an accession to the existing store of knowledge of the science and a further development of practical skill in the application of dental surgery.

In medicine and surgery provision has been made for

the poor to share with the rich all the advantages arising from the increase of professional knowledge by means of our numerous medical institutions. Persons whose earnings will not allow them to pay the fees of our great surgeons, can in serious cases, with but little trouble, place themselves under their gratuitous care. There is, throughout the length and breadth of the country, a vast amount of gratuitous attendance given by highly competent and distinguished practitioners to the poor, both in medical and surgical cases. The like should be said in respect of dental cases, but for the present it cannot, save to a very limited, though increasing extent. That the dentists have not been unmindful of the great dental needs of the poor, the following valuable papers and others that have preceded them, bear ample testimony.

The problem as to how adequate medical and dental attendance can be rendered to the poor cannot be solved wholly on the same lines; for where one person requires medical, ten will require dental assistance—where ten minutes may be sufficient for determining medical treatment, several hours must be spent in effecting dental treatment. Take for instance the case of a school of a hundred young people, ranging from the ages of ten to eighteen years, whose teeth have been neglected for several years, and it will be found that eight out of ten will require dental treatment, and that taking one with another not less than an average of two hours per patient must be given to restore the teeth to a healthy state. Now two hundred hours is a larger amount of time than a professional man, who has his living to get, can afford to give. Even this amount will not carry us further than the first year, and it is probable that a similar expenditure of time will be required in each successive year up to the patients reaching twelve years of age, that is if the full advantages of conservative treatment are to be secured.

Take again the position of affairs at a general hospital. A dental surgeon is appointed who has yet to make his way in practice. He, having ample leisure, devotes himself

to the treatment of cases as they present themselves by removing very bad teeth (an easy and short matter) and proceeds to treat by filling teeth savable by treatment (a difficult and lengthy matter). It becomes known that he is saving faulty teeth, and patients come in ever-increasing numbers, and the practitioner finds that the whole of his time would not suffice to meet the demands upon his skill. He cannot live by gratuitous practice, and so is constrained to fall back upon the old way of limiting his assistance of the poor to the removal of painful teeth. And it cannot be otherwise. If anyone will go carefully into the question he will soon see that the relief from extensive dental trouble, involving as it does so large an expenditure of time, cannot as a whole be gratuitously given by the dentists. Till lately there were not a sufficient number of capable dentists to render any general plan of relief practicable. Under the provisions of the Dentists Act the ranks are being, and have been, year by year, strengthened by the addition of highly competent practitioners. The services of these are at the disposal of the public for the treatment of the poor gratuitously to the extent that medical men give gratuitous service, mostly a service of advice, and of short operations. Beyond this, remuneration to some extent must be provided by those whose duty it is to provide for the necessities of the needy ; for certainly dental surgery would not be worth following as a profession if limited to gratuitous practice.

The subject of the supply of artificial for the replacement of lost teeth has not been touched upon, yet in many cases of indisposition, the first and most effective prescription of the physician is that lost teeth shall be replaced for securing proper mastication. In cases of rupture, institutions exist for the gratuitous or partly gratuitous supply of trusses. Why should there not be like institutions for the supply of sorely needed artificial teeth? But this question, though close upon us, may not be ripe for discussion. It will perhaps await the further development of the scheme for the saving of the natural teeth of the unmonied workers. A worthy purpose, but one that cannot be fulfilled by the

dentists alone. It can be rendered effectual only by the joint action of the public and the dental profession.

It cannot be doubted that mastication is necessary to health, and that sound teeth natural or artificial will alone effect proper mastication. The upper classes act upon this knowledge, and it may be reasonably hoped that ere long, the advantages of dental treatment which they secure to themselves, they will assist in securing to those who cannot otherwise obtain it. To this end the thoughtful perusal of the following papers is asked, as an instalment in the discussion of a large and pressing subject, for the full investigation of which other papers embracing different points of view are needed, and will no doubt appear both from the professional and public supporters of this beneficial movement. For dental troubles of a nature which can be relieved are not limited to sailors, soldiers and school children.

Central Counties Branch.

THE Annual Meeting of the Central Counties Branch of the British Dental Association was held at the Haven Hotel, Shrewsbury, on Friday, July 15th, when there were present: Mr. Breward Neale (Birmingham), President; Mr. W. E. Harding (Shrewsbury), President-Elect; and Messrs. Frank E. Huxley, Frank H. Goffe, W. Palethorpe, and Charles Sims, of Birmingham, Peyton Levason (Hereford), F. J. Thorman (Leamington), Roff King (Shrewsbury), J. S. Crapper (Hanley), Sidney Wormald (Stockport), Fred Bullin (Chester), W. H. Waite (Liverpool), W. D. Grant (Leicester), H. N. Grove (Walsall), J. Renshaw (Rochdale), J. Lee Pite (Sheffield), L. Matheson (London), Martin Sherwood (Oxford), Richard Owen (Wolverhampton), and John Humphreys, Hon. Secretary.

Mr. Charles Sims was chosen President-Elect for the year 1888, Mr. Hutley re-elected Treasurer, and Mr. Humphreys, Hon. Secretary, and it was decided to hold the next Annual Meeting in Birmingham at the time of the visit of the British Dental Association.

Mr. Levason, of Hereford, having resigned his seat upon the Council, Mr. W. R. Roberts, of Lichfield, was elected in his

stead, and Mr. W. Palethorpe, of Birmingham, was also elected a member of the Council.

Mr. Breward Neale, the outgoing President, was unanimously elected Vice-President of the Branch.

Mr. Leonard Rice Oxley, of Shrewsbury, and Mr. H. N. Grove, Walsall, were elected members of the Branch and of the British Dental Association.

Letters of apology were received from Sir Edwin Saunders, Sir John Tomes, Messrs. Charles White, Morton Smale, J. Smith Turner, S. J. Hutchinson, F. Canton, Dr. Walker, the Mayor of Shrewsbury, and others who were prevented attending the meeting. The Treasurer's report showed a balance in hand of £3 5s. 3d.

The PRESIDENT proceeded to deliver his farewell address. He thanked them all for the kindness and consideration he had received at their hands during his year of office, and he especially thanked those who had read papers and those who had joined in the discussion of them, for without a good discussion the chief value of a paper was often lost. It was very satisfactory to know that they had had some good papers read, and that the subjects had been thoroughly well thrashed out, the opinions elicited of really practical men. No man worthy of the name of a dentist had a right to keep to himself and from the knowledge of his fellow practitioners information which would be to their benefit, and, of course, to that of the public at large. The men the most successful in the profession were always the men who most regularly attended the meetings and were most ready to impart the knowledge they possessed to others.

Mr. W. E. HARDING, the President-Elect, then took the chair, which the late president vacated, and, in the course of his presidential remarks, said :—

First allow me to express my thanks for the honor you have conferred upon me by placing me in the chair of the Central Counties Branch of the British Dental Association, and to welcome you to the old town of Shrewsbury. I hope your visit will afford you both pleasure and profit.

In accepting the office of president, one of the greatest difficulties of the position to me has been the preparation of an address.

The large number of branches of the British Dental Association which have now been formed, each having an annual presidential address, has so thoroughly thrashed out all the various

subjects of interest, that it is difficult to bring forward any very novel ideas.

With reference to the past history of the profession I shall not detain you long.

We often hear doubts expressed as to the wisdom of the connection with the College of Surgeons which took place in 1859.

For my part I maintain that our profession is as much a specialty of surgery, as ophthalmic or aural surgery are, and that alliance paved the way, I fully believe, to the Dental Act of 1878. But for us to discuss whether the alliance was an act of wisdom or not is as useless as for practical politicians of to-day to debate the wisdom of the first reform bill, or catholic emancipation. The past is gone, the present is ours, and the future of the dental profession is in your hands.

Doubtless the Dental Act was in some measure a compromise. In piloting that measure through the House of Commons, Sir John Tomes was obliged to accept compromises on many points, for though Sir John Lubbock was, if I may use the expression, the figure-head, Sir John Tomes' was the guiding hand; but like the great general he is, he kept his eye fixed on the central point of the whole Bill, viz. :—a complete and official register of all dentists in practice at a given date, with admittance to that register in the future only through the door of education.

It is that register which constitutes us a profession, and gives us a legal status, and it is of the utmost importance that the register should be kept as correct as possible; indeed, in the proportion in which the register is allowed to become incorrect, we lose the advantages for which our leaders have striven so hard. To keep it correct needs constant watchfulness.

The Medical Council cannot do this, or will not take the trouble, and it is impossible for the Representative Board to do the work thoroughly without your hearty co-operation; indeed, it is the duty of each individual member of the British Dental Association to assist in this, by constantly comparing names in the register with those of the practitioners in their own neighbourhood, and reporting any errors to the Representative Board.

I fear it is gradually getting incorrect in several particulars, amongst which may be mentioned names of deceased men not removed, addresses not corrected after removals, licentiates unregistered, &c., &c., &c. These are errors which only men living in the locality can correct, and will do the profession far

more serious injury than a few advertising men practising here and there.

I have often heard men make disparaging remarks of the Association, such as "Why don't they prosecute So-and-so?" &c., &c. These remarks are generally made by those who stand aloof, and take good care not to put their own shoulders to the wheel. The answer to these critics is, that every prosecution costs a large sum, and the Association has not the sinews of war to institute legal proceedings in every case, but the Representative Board have very wisely resolved only to prosecute in those instances where they had a clear case, and thus by carrying their point in every case to establish a series of precedents, and to obtain the ruling of the law courts on all the doubtful points in the Act.

There are several defects in the Dental Act of 1878, the chief one being that we have no voice in the management of our own affairs. To remedy this, we want either to have one or two representatives on the Medical Council, or the dental business transferred to some other body, and the only body who could undertake this to the satisfaction of the profession is the British Dental Association.

This will all come in due time. You will remember that the medical profession, with their influential association of some thousands of members, were eight or ten years in getting their amended Act of last session.

But for the present we must do our utmost to advance and consolidate the British Dental Association. Remember union is strength. "United we stand, divided we fall," is an old and true adage. Every man who joins the British Dental Association adds to its strength, and on the lowest ground—that of self-interest—every eligible practitioner should join us.

Amongst the advantages I may mention that of educational and intellectual improvement which we gain from the interchange of ideas, papers, demonstrations, &c., and last, but not least, that of social intercourse. By the very nature of our work we are isolated from our fellow practitioners, and at such gatherings as this we find that our contemporaries are not such bad sort of fellows, and he who is willing to learn may pick up a wrinkle here and a hint there which may be of great value, for we are never too old to learn.

Turning now from the Association as a body to our own Branch :

though the "Central" is one of the younger branches, and in point of numbers only a small one, it has done good work during the past year under the guidance of its energetic President.

There have been four meetings held since the last annual one, at which several very important papers have been read, eliciting most animated discussions. We have also had instructive demonstrations, and many interesting cases as casual communications.

I sincerely trust that during my year of office the Central Counties Branch will flourish and extend, making as satisfactory progress in the future as it has done hitherto, and justifying its existence by its utility both in profit and pleasure to each individual member.

Be assured that no effort of mine shall be wanting to ensure this success.

A vote of thanks to the President was passed for the address, and the members then partook of luncheon at the invitation of Mr. R. King and the President. Subsequently there were demonstrations of a practical character, and in the afternoon an excursion to Haughmond Abbey.

The Annual Dinner subsequently took place at the same hotel. The chair was occupied by the President, Mr. Harding, and the vice-chair by Mr. Sims.

After an excellent spread was partaken of by a number of members and friends, the CHAIRMAN gave the health of the Queen, which was heartily received.

Mr. J. ALLEN BRATTON gave the British Dental Association, coupled with the name of Mr. Sims.

The toast was received with musical honours, and Mr. SIMS responded, stating that that Association had done a great deal for the profession, and would no doubt do much more.

Mr. HUXLEY, in proposing the Medical Charities of Shropshire, said he was glad to know that some of their members were doing a great deal of charitable work, and he would couple with the toast the names of Mr. Harding, of the Salop Infirmary, and Dr. Charnley of the Eye, Ear, and Throat Hospital.

Mr. HARDING, on behalf of the Salop Infirmary, said by giving their services at those institutions they gained much knowledge, and he was glad to say that the staff at the Infirmary was keeping pace with many hospitals in larger counties than Shropshire.

Dr. CHARNLEY responded on behalf of the Eye, Ear, and Throat Hospital.

Mr. B. NEALE proposed Success to the Shropshire and Mid-Wales Branch of the British Medical Association, and Mr. J. A. BRATTON responded.

Success to the Representative Board of the British Dental Association was proposed by Mr. ROFF KING, who said the members on the Representative Board were the cream of the profession, and, he thought, represented them well.

Mr. SIMS responded.

Dr. CHARNLEY gave the toast of the Central Counties Branch of the British Dental Association.

Mr. HARDING and Mr. J. HUMPHREYS, whose names were coupled with the toast, replied.

The Health of the President was given by Mr. KING, who spoke in high terms of Mr. Harding, and the toast was received with musical honours.

Mr. HARDING replied, and then gave the Visitors.

Mr. T. S. STOOKE and Mr. DOWNS responded.

Mr. KING proposed the Ladies, and Mr. DOWNS responded.

Mr. JOHN HUMPHREYS proposed the Health of Mr. King, and Mr. KING replied.

During the evening a number of songs and recitations were given, the party breaking up after spending a most enjoyable evening.

Southern Counties Branch.

THE first annual meeting of this Branch was held at the Public Hall, Croydon, on Saturday, 16th July, under the auspices of Alderman Rymer, J.P., President. Among those present were: Messrs. J. H. Whatford, Eastbourne; Van der Pant, Kingston-on-Thames; J. Cornelius Wheeler, Portsmouth; J. H. Redman and J. Dennant, Brighton; Morgan Hughes, Croydon; W. Saunders, Ramsgate; J. E. Welch, Brighton; George Pedley, London; E. T. W. Cooksey, Worthing; I. H. Reinhardt, Brixton; J. C. Foran, Eastbourne; W. T. Trollope, Tunbridge Wells; Edward Moore, Croydon; Duncan W. Amore, St. Leonards-on-Sea; Stephen Hoole, Croydon; A. Gabell, Red Hill; W. H. Daish, Ryde; W. George Daish, Ryde; S. T. Silvester, Croydon; B. Williams, Croydon; H. O. Colyer, Ryde; Felix Weiss, London; T. Beadnell Gill, Upper Norwood; F. Canton, London; James Rymer, London; T. Gaddes, London; M. Barton, Eastbourne;

Charles M. Cunningham, Hove ; S. J. Hutchinson, London ; Boyd Wallis, London ; A. Matthey, Croydon ; T. Jackson, Croydon ; George Cunningham, Cambridge. The proceedings of the day commenced with a meeting of Council in the morning, followed by a luncheon at one o'clock, given by the President, at which between thirty and forty members and visitors were present. This was followed by a delightful drive through very pleasant country, which the President, in kind and thoughtful consideration, had generously planned for the enjoyment of his friends. By the kind permission of his Grace the Archbishop of Canterbury, the party drove through Addington Park, a most delightful spot, richly undulating and wooded, to the site of the new reservoir for Croydon, commanding very extensive views of the picturesque neighbourhood. After a pleasant rest, during which the places of note and interest were pointed out, the party returned thoroughly refreshed to the serious business of the meeting at Croydon. This was held at 3.30. The minutes of the first meeting at Brighton were read and confirmed ; and Mr. Dennant, Hon. Secretary, read the following report.

In presenting their first Annual Report your Council are pleased to record that a steady progress has been made in the objects and aims of the Southern Counties Branch of the British Dental Association. Since the meeting in last July, seventeen members have been added to the Branch, and through the Branch eight have been added to the parent Association. The Council regret to report the death of one member during the year, Mr. Anderson of Maidstone. The number of members remaining on the books is fifty-six.

The first formal meeting at Brighton, under the happy auspices of Mr. Alderman Rymer as the first President, was an unqualified success. Two informal meetings held on the occasions of the meeting of Council, in the months of November and March, were well attended, many of the members coming from considerable distances, thus showing their heartiness in the cause of dental progress.

These meetings have been reported in the Journal of the Association, and require no other comment than that the subjects introduced were many and practical, and the discussions free and informal, and found to be interesting to the members.

The Council are happy to report that the finances are in a satisfactory condition, and only require the kind co-operation

of members in the prompt payment of their subscriptions to keep them so.

The resignation of Mr. Todd of Brighton, as a member of Council, has been received with regret, he preferring to remain a simple member of the Branch. It will be the duty of this meeting to appoint his successor.

The Council earnestly solicit the members to contribute short informal communications on subjects of a practical character. They hope that the younger members of the profession will see it to be their duty to do something in this way for the general good, and not be deterred by the commonplace nature of the facts they may wish to call attention to.

It is well known that the simplest facts are invested with interest, when a variety of opinion is expressed upon them, and the habit of recording points of interest in practice not only benefits the individual, but serves to mark the progress of a profession.

The Council trust that the members will exert their influence in their several localities, to induce eligible members of the profession, who yet hold aloof, to join the Association and Branch, not only to promote the cause of professional progress, but to strengthen the position of the Association as a representative body.

(Signed) S. L. RYMER,
President.

The PRESIDENT said he had much pleasure in moving the adoption of the report and the statement of accounts, which had just been read. He thought on the whole they must be regarded as gratifying. It would be seen that they had in the course of the year increased in numbers considerably. Their progress had been steady, and they had been instrumental in introducing several new members to the parent association, which he thought was exceedingly gratifying. They had lost one of their friends by death, Mr. Anderson, of Maidstone. He was a gentleman much respected, and he was sure they all regretted much to hear of his death; otherwise their numbers were in a very flourishing condition generally. Their financial statement showed a healthy condition; and there was a respectable balance in hand after payment of all expenses. He did not feel called upon to trouble them with any formal address that day; at their first gathering last year they had elected their officers for two years, in order that

they might get the affairs of the new branch thoroughly into order, and therefore this present gathering was to some extent an interim meeting. Last year they met in the magnificent town of Brighton, with its grand sea front. Now they met in Croydon; they could not offer them a grand sea front or the palatial buildings to be seen in Brighton, but they had around them a beautiful country, and they had a fine town, which he ventured to say was a well governed town. It was not unusual on occasions like the present in welcoming guests, as he welcomed them with very great pleasure to Croydon, to descant somewhat upon the peculiar advantages of the district. The town was a very old one, and they did possess some ancient buildings still. They had the relics of the great archiepiscopal palace, occupied by the Archbishops of old for centuries, and where Queen Elizabeth and Queen Mary were respectively entertained. They had their Whitgift Hospital, founded by Archbishop Whitgift over 300 years ago—a grand foundation, connected with which were schools in which education was being carried on to perfection, carried on so that the children even in board and elementary schools could go from there to intermediate schools, then on to the Whitgift Grammar School, and from thence to the Universities. These institutions they were proud of, and justly so. But he did not intend to detain them with observations on these antiquities; rather, he should like to refer them to the present prominent glory of Croydon, and that was their extremely satisfactory sanitary condition, and the consequent great increase in population. It was many years since he first came to Croydon, a very young man, and at that time, in 1852, it had a population of about 20,000; it was now 90,000, and he attributed that increase very much to the enterprise of men 35 years ago in acting as pioneers, and introducing the provisions of the Public Health Act of 1848. At that time the sanitary arrangements were anything but satisfactory, and when that Act was introduced and a Local Board elected, one of the first things to be done was to produce a perfect system of drainage, and the introduction of the magnificent system of water supply which they now had; and in other ways important alterations were made, which had been the cause of very great improvement to the town. All this resulted in an enormous increase in the population of the borough. There was nothing which tended more to the health and prosperity of a town than did sanitation, and it was a fact that they had reduced their

death-rate from a very high rate 35 years ago to one of the lowest in England. The death-rate for the last ten years for the town districts of England was 21.90 : in the country districts of England — which were regarded as the most healthy — it was 18.30 ; for all England it was 20.40 ; and in the Borough of Croydon 17.11, showing what sanitation had done for the town of Croydon. In connection with this subject he would like to refer them to a very important and interesting address recently delivered by that veteran scientist, Mr. Edwin Chadwick, on the beneficial value of sanitary science, in which he showed the great value from a financial point of view of sanitary science to the nation, and how the health and lives of the people were lengthened and maintained by attention thereto. It might be said, what has all this to do with our speciality ? He thought it had something to do with it. The education of dentists now was of a high scientific character, and, of course, in the progress of that education their pupils were associated with those engaged in teaching medical science generally, amongst whom were the firmest supporters of sanitation, and therefore, he said, through their knowledge, they might all in their several spheres assist the authorities in carrying out works of sanitation, where prejudice, as they knew, did exist to its extension, on what were erroneously supposed to be grounds of expense, whereas sanitation in the long run must make the people healthier, wealthier and better all round. Their business should be to unite with other sanitarians in pressing upon Parliament the necessity for a Minister of Public Health, through whom general and special reforms could be carried to a successful and speedy issue. Numbers did not yet see the importance of the teeth in promoting and maintaining health. Amongst the wealthier classes, of course, this was fully acknowledged, otherwise there could not be so large a staff of dentists maintained throughout the country. Amongst the poorer classes it was only lately recognised. It had been introduced by the work of the Metropolitan and Provincial Dental Hospitals ; then again by the introduction of skilled attention amongst the men of their Army and Navy and other important institutions, and in their public schools great attention was being given to the teeth. In schools for this locality the same fact was evident. In the North Surrey Industrial Schools they had recently appointed a dentist to look after the children's teeth, and he believed there were other institutions around where similar arrangements were

being made. This matter was one that interested them both individually and collectively, and was one where he thought the branches of the Dental Association might do a great deal. Individually they might do something, collectively they could do a great deal, by impressing on the powers that be the great importance of skilled attention to the teeth amongst the poorer classes, who, after all, were the greater part of the populace. All these things were progressing. It was for them, as individuals and in their corporate capacity, to help on the grand work, for it was a grand work to help forward the sanitation of the country, so as to preserve the health of the population. They had heard a great deal of the Jubilee, but he could not help saying that the most glorious jewel in the Jubilee crown was the improved health of the people. When Her Majesty came to the throne fifty years ago, the mean duration of life was thirty years; in those fifty years it had advanced to thirty-eight years. This was in great measure due to sanitary progress. It was a grand result, and it must still go on. He believed something was due to the exertions of their own profession, because they knew that digestion could not go on well without good teeth. Good teeth needed attention for their preservation, and a good deal of attention had been paid, was being paid, and would be paid in the future. He had now much pleasure in moving the adoption of the report.

Mr. WEISS said he had much pleasure in seconding the adoption of the report. He did not think after the admirable speech of their President it would be necessary for him to add much. He could only emphasise most heartily the necessity of due attention to the teeth in schools and public institutions. From his connection with the Sanitary Department of the Metropolitan Board of Works, he could endorse all that had been said by Mr. Rymer as to the importance of sanitation.

The report was adopted unanimously.

Letters and telegrams expressing regret at inability to attend the meeting had been received from Sir Edwin Saunders, Sir John Tomes, and Messrs. J. Woodhouse, C. S. Tomes, J. S. Turner, Arthur Underwood (of London), R. Rogers (Cheltenham), George Henry (Hastings), Bacon (Tunbridge Wells), Bromley (Southampton), Henry (Folkestone), Whatford (Brighton), C. A. Amooore (Dover), &c.

Mr. J. H. REDMAN proposed that Mr. Wrightson Amooore, of

Hastings, be elected to the vacancy on the Council, caused by the resignation of Mr. Tod, and Mr. J. H. WHATFORD seconded the proposal, which was carried unanimously.

Mr. AMOORE briefly expressed his thanks for the compliment conferred on him by the meeting.

ELECTION OF PRESIDENT.

The PRESIDENT said it was suggested by the Council that next year's meeting should take place at Southsea, and that Mr. J. Cornelius-Wheeler, of that place, be the president. This, of course, was only a suggestion, and it was for them to decide.

The HON. SECRETARY said he had much pleasure in proposing "that Southsea be the next place for the annual meeting, and that Mr. J. Cornelius-Wheeler be the president-elect." They had held two meetings in the centre of the district, and the Council felt it desirable in the interests of the Association that they should go further a-field, and visit such an important town and neighbourhood as Portsmouth. It was a very agreeable duty to him to mention the name of Mr. J. Cornelius-Wheeler as their future president; for that gentleman had recognised at the earliest moment the importance of forming a Southern Branch of their Association, and had maintained an unflagging interest in all that concerned its welfare. He was sure that his election would not only meet with the hearty appreciation of the meeting, but would be hailed with satisfaction by the profession generally.

Mr. VAN DER PANT seconded, and the motion was carried unanimously.

Mr. CORNELIUS-WHEELER said he was very much obliged to them for the honour they had done him. He would endeavour to fill the post worthily, and he could ensure them a hearty welcome when they visited Portsmouth next year.

THE REGISTER.

Mr. DENNANT asked to be allowed to refer to a matter of considerable importance to them all. He alluded to the present imperfect state of the Dental Register. It was a matter of much importance, and there were considerable difficulties connected with it. There were numbers of names at present on the Register of persons who were dead and gone. That ought not to be, and this difficulty was not to be rectified by any one individual, or even by two or three. It could only be done by a general effort of all the members of the Association and its

branches. If they would take an interest in their special towns and districts, it could be done in this way. That is to say, that when any member of the profession had departed, it would be very simple work for another living in the same locality to call on the local registrar of deaths, and ask him if he had attended to the matter, and if the registrar's attention was called to it, that would be sufficient, as they received a fee for the notification of each case. The chief difficulty was that so many on the Dental Register were not known to the registrars themselves as dentists, as they were first classed as practising in conjunction with pharmacy, and would be better known as chemists. The difficulty was new to them, and it appeared to him that if some of those living in the large towns of their district would submit lists of names of those who were deceased, either to himself or to the Representative Board, it would be of great assistance to that Board, and a very useful work.

Mr. CANTON agreed that the chief difficulty was with the chemists, and if individual members would adopt this suggestion, it would be of immense assistance. At the same time they need not be very grieved about it, because the Medical Register was in a far worse state.

Mr. GADDES thought it would be good policy to adopt the course pursued with regard to the medical directory. A registered letter was sent out to every one appearing on the Register; a great many of these were returned to the Dead Letter Office, and were therefore removed from the Register.

Mr. CANTON said this was done by Mr. Miller of the Medical Registration Office.

Mr. HOOLE stated that in one case he had done as suggested, and told the local registrar that a gentleman whose name appeared on the register did not live at the address given, and had never done so. The registrar told him that he could not interfere in the matter. The man he mentioned was actually not in existence at all.

Mr. G. CUNNINGHAM thought that Mr. Hoole should have communicated with the Hon. Secretary of the Association.

The discussion then terminated.

Mr. W. GEORGE DAISH, of Ryde, then read a paper "On the Treatment of Sensitive Dentine by Nitrate of Silver."

The PRESIDENT remarked that Mr. Daish's communication was of an extremely practical nature, and they would be very

glad to hear any observations upon it. He should be pleased if the visitors present would take part in any of the discussions which might take place on the papers.

In the discussion which ensued on this paper, Mr. CUNNINGHAM, of Cambridge, said that he had used nitrate of silver, but preferred in cases where that was indicated, the acid nitrate of mercury, which had the additional advantage that it did not cause discolouration of the teeth, and was extremely useful in destroying sensibility in pulps.

Mr. C. M. CUNNINGHAM, of West Brighton, read a paper on "The History of the Treatment of a Mouth on the Mechanical Method."

In allusion to this paper Mr. DENNANT thought Mr. Cunningham had given them the history of a case which strongly emphasised the importance of the conservative treatment of the mouth. There could be no question that mouths were daily ruined by badly conceived and badly adapted artificial arrangements. That would always be so with a certain class of men, who seemed as if they could only regard their profession as a means of extortion, and where that motive prevails of course you have what Mr. Cunningham calls the artificial method. The profession, however, was becoming more and more conservative in the treatment of the teeth; and, although they were all accustomed to the sight of ruined mouths, he took a hopeful view that with the spread of knowledge on the subject among the public, backed up by the skill and conscientious work of the profession, there would be great improvement; and, although they would not live to see it, the teeth two or three generations hence would be better than they were at the present day.

Mr. G. CUNNINGHAM corroborated the statements of the author of the paper as to facts.

Mr. S. J. HUTCHINSON then delivered a communication on "The Treatment of Buried Wisdom Teeth."

Mr. WELCH exhibited a "supernumerary wisdom tooth" of very small dimensions, which he had extracted. This was a very diminutive and unique specimen.

Mr. B. WILLIAMS exhibited models taken from the mouth of a child of fifteen in a very backward stage of development. There were only four first and second molars through, and two of the lower and upper centrals just beginning to show. There was no appearance of disease in the gums whatever.

Mr. M. HUGHES showed two models of supplemental teeth. In one case there was one between the two superior centrals, and in the other two supplemental teeth between the centrals and laterals. He also explained a new reflector, the invention of Mr. Bullard, of Croydon, in which there was a moveable arm, by which the light could be adjusted to any height or position.

Mr. GILL exhibited a small right angle mallet of ingenious construction.

Mr. WALLACE read a paper on a new medical electric dynamic machine invented by him.

The PRESIDENT then proposed a cordial vote of thanks to those gentlemen who had favoured them with papers and communications, and to the Archbishop of Canterbury for allowing them to pass through his park.

This was seconded and carried.

The hon. secretary announced that the Council had that morning elected to the Branch two well known gentlemen, Mr. Felix Weiss and Mr. S. J. Hutchinson; they had also elected to the Association and Branch :—Mr. James F. Rymer, M.R.C.S., and L.D.S.Eng., 10, Bentinck Street, Manchester Square, London; Mr. Simeon Talbot Silvester, L.D.S.Eng., 50, North End, Croydon; Mr. William Thos. Trollope, L.D.S.I., Tunbridge Wells; Mr. F. C. Mortimer, Cornwall House, Ordnance Row, Portsea; Mr. Edmond Dubois, 103, Camberwell Road, S.E.; Mr. G. A. Bullard, 105, Maddon New Road, Croydon.

This concluded the proceedings.

THE DINNER.

The dinner was held in the small Public Hall, which was most tastefully decorated with flowers, flags, &c. About fifty sat down under the presidency of Mr. Rymer, among whom were the following members of the medical profession :—Drs. Duncan, Thompson, Lister, Morton, Adams, Strong, Jackson, Matthey and Richardson, Mr. C. M. Elborough, Town Clerk of Croydon and other guests.

After the loyal toasts had been given and honoured,

The PRESIDENT said he had the honour to propose the toast of "The Odontological Society," which occupied a very high position, and was second to none in regard to similar societies. The stores of knowledge which were to be found within the records of

the Transactions of the Odontological Society were invaluable for study to all those who wished to utilise them. Of course, to a certain extent, it was an exclusive society, being confined to scientific investigation; but, at the same time, it was no doubt carrying out a good work, and advancing the interests of the profession in the highest possible way. He did not intend to enlarge upon it because they did not wish to have long speeches that evening, and he would therefore give them the toast of "The Odontological Sociey," which, indeed, commended itself.

Mr. BOYD-WALLIS (as one of the hon. secretaries of the Odontological Society) in response said he was called on to assume a very unexpected honour, and he was quite unable to do justice to this theme. He begged to thank them very much for the manner the toast had been proposed and received by them.

Dr. STRONG, in proposing the next toast, said the British Dental Association was, it might be said, only in its infancy, and yet it had made giant strides. It was analogous to their British Medical Association in the manner in which it had been formed, and these lines were being followed in the meetings which were being held. Now they were met to celebrate the first annual meeting of the Southern Counties Branch of the British Dental Association. Many of those now present were at the inaugural meeting held at Brighton last year, when on looking round for some gentlemen who should occupy the important position of first President, no one was found more worthy than their President of that evening. How well he fulfilled the duties at Brighton those who had the honour and privilege of being present well knew, and those of them who read the address knew how well that address was delivered, and how valuable and practical it was to all who were interested, not only those associated with the Dental Association, but to medical men. In the profession of dentistry no one was more esteemed than their President of that evening. It was well known that Mr. Rymer was one of the pioneers of reform in regard to the dental branch of the medical profession. In 1855, in consequence of the action that Mr. Rymer took, a few enthusiastic and scientific gentlemen met together, and from the meetings held at their various houses, the organisation which Mr. Rymer had spoken of as occupying a very high position in dentistry, was started. They who lived in this town, and who had known Mr. Rymer for so long were rejoiced to find that he was equally well

known and honoured among his professional brethren. But it was not alone in his profession that he had laboured ; in other places his energy and activity had equally shown themselves, and as the result of those labours he now occupied the position of Alderman and Justice of the Peace for the Borough of Croydon. Some might not know how nearly he had lost his life some years ago by a railway accident, and that in fact his remains were sought after in a tunnel, but happily he escaped and was spared to them. He would ask them to drink heartily to the health of the Southern Counties Branch of the British Dental Association, coupling with the toast the name of their President.

The PRESIDENT, in reply, said he felt deeply touched by this exhibition of their personal friendship and esteem. He was grateful that the accident alluded to had not proved fatal, especially because he would not have experienced the pleasure of meeting his good friends that evening, sound in body and soul. He thanked them for the great honour they had done him personally. With regard to the British Dental Association and the Southern Counties Branch, he was sure that all connected with it would appreciate the honour done them. It was a very valuable association, and it excluded no man who was at all worthy of a place as a professional man. He was glad to say that a large number of members had availed themselves of the privilege of joining both the parent Association and the several Branches, and that they were continually adding to their numbers ; with regard to what had been done by that and kindred Associations in the course of the last thirty years, he thought they had cause for congratulation. He knew that they would always find some croakers in organizations of this kind, but on the whole, he thought they might be thoroughly well satisfied with the progress made. Their profession was now recognised by the Legislature and by the medical profession, and they ought to be well satisfied. Before the time mentioned by Dr. Strong dentists were a scattered body, and the consequence was that a great deal of information and scientific knowledge that all might have shared in common was confined to a very few individuals. Now a totally different state of things existed, and as bearing witness to this they had many representative bodies in this country, America, France, Germany, Austria, and even Russia. Comparing the position of the dental profession now with what it was at that time, it was something marvellous and wonderful to his mind, that the progress was so

great, so decided, and so certain to continue. An incentive has been given to this by the British Dental Association, whose efforts from a scientific and literary point of view were most valuable, and which also gave them the opportunity of meeting together in a pleasant social way as on the present occasion.

Mr. WEISS proposed "The Medical Profession," coupling with that toast the name of Dr. Adams, the senior member of the staff of the Croydon General Hospital. He remarked that they in their profession were justly proud that they were on such excellent terms with the members of the medical profession. There were some who thought it would have been better had they not united themselves to the College of Surgeons. He must say that they had found throughout the whole of their association with the College of Surgeons that they had been received in a manner that could not fail to make a very deep impression upon them, and he thought that to revive that old question as to whether they would be better under this or that dispensation was a mistake. He had had an opportunity of speaking to men of all shades of opinion, and when he asked, "Now do you think the profession of dentistry would have been enhanced if we had taken any other course?" the answer from all classes of men was, "We believe you would not have been in the same firm position, respected by the public generally and the medical profession if you had adopted any other course." They had always been encouraged by the medical profession in their efforts of reform.

Dr. ADAMS said that on behalf of the medical profession he had to thank them for the very kind reception they had given them that evening, and for the very pleasant entertainment they had received. The medical profession was very pleased to assist the dental profession in any way in their power, and he was very pleased to find that they were under the wing of the Royal College of Surgeons. His association with their President as one of the staff of the Croydon Hospital had been most agreeable, and he heartily wished continued prosperity to the dental branch of medical science.

Mr. WHEELER proposed the "Dental Benevolent Association," which he thought should never be forgotten at any of their meetings, but that on every possible occasion this charity should be pleaded for.

Mr. DENNANT responded, remarking that the practical administration of the fund had been attended with excellent results.

They had had most deserving cases amongst the recipients of the fund, and he did not think there was a single case in which it had been abused in any way.

Mr. WHATFORD proposed the toast of "The Visitors," to which Mr. C. M. ELBOROUGH responded.

Mr. HOOLE proposed "The health of Mr. Morgan Hughes," on whom had devolved the carrying out of all the details connected with the meeting and dinner, and which had proved so highly successful.

Mr. HUGHES briefly replied, and this concluded the formal toast list, which had been interspersed with some capital music by Messrs. Collart, Montague, Redman, Williams, A. D'Archambaud, and others.

Annual Meeting of the Western Counties Branch.

THE Western Counties Branch of the British Dental Association held its Annual Meeting this year at Stroud, the home of the President-elect. With beautiful weather, a hearty welcome, and admirable arrangements, the reunion passed off with the greatest success, and the members present will doubtless look back with much pleasure to their first visit to a district which, as was observed at the general meeting, while boasting no grand or imposing artificial features, is almost unrivalled for charm and variety of scenery. The proceedings commenced on Friday, the 29th of July, and a large number of members arrived on the Thursday night, and took up their quarters at the Imperial and George Hotels. On Friday morning a Council meeting was held at the Imperial Hotel, and this was followed by the General Meeting at eleven o'clock at Lansdown Hall. The attendance comprised the following:—Mr. J. T. Browne-Mason, L.D.S.Eng., Exeter (the retiring President); Mr. E. Apperly, L.D.S.Eng., Stroud (the President-elect); Mr. T. Cooke Parson, M.R.C.S.Eng., Clifton, Bristol; Mr. Richard Rogers, L.D.S.I., Cheltenham, and Mr. George C. McAdam, L.D.S.Eng., Hereford (Vice-presidents); Mr. F. H. Balkwill, L.D.S.Eng., Plymouth; Mr. C. A. Hayman, L.D.S.Eng., Bristol; Mr. W. Helyar, L.D.S.I., Bristol; Mr. A. Smith, L.D.S.I., Clifton, Bristol; Mr. G. N. Washbourn, L.D.S.Eng., Taunton; Mr. Henry B. Mason, Hon. Secretary, Exeter (members of the Council); Mr. F. H. Briggs, L.D.S. Edin., Torquay; Mr. T. S. Coker, L.D.S.I., Clifton, Bristol; Mr. W.

A. Cronin, L.D.S.I., London; Mr. W. H. Fox, L.D.S.Eng., Gloucester; Mr. W. T. Goodman, Exeter; Mr. H. Apperly, London; Mr. R. Harrison, L.D.S.Eng., London; Mr. S. J. Hayman, L.D.S., Clifton, Bristol; Mr. J. Hay, Swindon; Mr. W. C. Williams, L.D.S.Eng., Leamington; Mr. T. Charters White, M.R.C.S. and L.D.S.Eng., London; Dr. W. H. Waite, D.D.S., L.D.S.I., Liverpool; Dr. Maughan, M.D., M.R.C.S., L.R.C.P.Lond.; Mr. Alfred Kendrick, Taunton; Mr. Ernest Fox, Gloucester, and Mr. J. Smith Turner, London.

The Hon. Secretary read the minutes of the last Annual Meeting, which were unanimously confirmed.

The Hon. Secretary mentioned that letters of apology for inability to attend, had been read from, amongst others, Mr. F. Canton, Great Marlborough Street, London; Mr. W. A. Hunt, Yeovil; Dr. Walker, London; Mr. T. A. Rogers, Tavistock Square, London; Mr. George Parkinson, London; Mr. James Parkinson, Eastbourne; Mr. H. Bennett, Hanover Square, W.; Sir E. Saunders, Hanover Square, W.; George Cunningham, Cambridge; Sir J. Tames, London, &c.

The Chairman stated that the following had been duly elected members of the Branch by the Council at their meeting that morning:—Mr. Thomas Charles Colledge, Stroud; Mr. James Lewis Robertson, Cheltenham, members of the Association and Branch. Mr. Herbert Apperly, London; and Mr. Alfred Kendrick, Taunton, members of the Branch.

The Hon. Secretary read the report of the Council as follows:—The Council have pleasure in presenting their report to the annual meeting of the Branch. Last year's meeting at Exeter was more successful, both as to the attendance and the number and merit of the papers, the President's address being followed by papers and demonstrations from Dr. Walker, Mr. Tosswill, Mr. Roper, Mr. Hunt, Mr. Balkwill, Mr. Ackland, and Mr. Pearman. The visit to Exeter was in some sense a return one, the Western Counties Dental Association, which became in 1882 the Western Branch of the British Dental Association, having held its inaugural meeting there in 1879.

The Council held their usual April meeting at Cheltenham, on the 16th of that month. Several matters of importance were considered, but the only one which it is necessary to bring before this meeting is a recommendation, on the proposal of Mr. Browne-Mason the President, that a donation of ten guineas, out of the

surplus funds of the Branch, be given to the Dental Benevolent Fund. The Council hope this recommendation will meet with the unanimous acceptance of the members.

The members of the Branch now number seventy-six, against seventy-eight at the Exeter meeting. Two gentlemen have been removed from the list by the Central Association, for non-payment of subscriptions; five have resigned—a loss of seven. One new member was elected by the Council at Cheltenham and four to-day.

The Council propose that the next annual meeting be held at Tiverton, with Mr. J. Rogers Bate as President.

The financial condition of the Branch is very satisfactory.

The retiring PRESIDENT, as Hon. Treasurer, then read his report, which was in every respect satisfactory, as showing a balance in hand of £13 3s. 3d.

Referring to the subscriptions, the chairman stated that he had that morning received two subscriptions (one for two years), so that there were only three members in arrears, and as they were all good men and true, no doubt their subscription would be forthcoming in due course.

Messrs. Harrison (London), and Balkwill (Plymouth) were appointed auditors by the meeting, and on the proposition of Mr. William Helyar, seconded by Mr. W. Caleb Williams, it was unanimously resolved—that the reports as read be received and adopted.

On the proposition of Mr. A. Smith, seconded by Mr. McAdam, the following were elected members of the Council:—Mr. T. Taylor George (Clifton); Mr. Ernest Fox (Gloucester); and Mr. Martin Magor (Penzance), in the place of Mr. A. G. Twason (Hereford); Mr. A. B. Verrier (Weymouth) and Mr. R. P. Morrison (Barnstaple), who retired.

THE CONDITION OF THE REGISTER.

The CHAIRMAN called upon Dr. Waite to make a communication to the meeting.

Dr. WAITE, who was received with applause, in introducing a question of vital importance to the Association, said he should first like to report that he had received a letter from Dublin, announcing that there had already been a meeting of dentists there, and that arrangements had been made for another meeting in the course of a few days, for settling the preliminaries for estab-

lishing an Irish branch of the Association, which would probably be in existence very shortly. The matter which he specially desired to bring before their notice was the condition of the Register. In the last issue of the JOURNAL, there was a letter from the Secretary, calling attention to the fact that a number of persons left on the Register were dead. He wished the Secretary had gone into the matter a little more fully, and given the facts of the unsatisfactory state of the Register, because it depended upon the action of the individual members to get it into order, and unless members were made acquainted with the actual facts, they could not be expected to take the necessary interest to accomplish the desired reform. There were three classes of defects in the Register, and he would mention them in the inverse order of their importance. The least important were the clerical defects, errors in spelling and addresses. These did not seem much looked at singly, but an error of spelling was really of vital consequence. An incorrectly spelt surname would be a bar in any legal proceedings; and in such cases the Register was of no value, so far as the name was concerned. These errors had passed from year to year, and appeared just as in the first issue. Some of the clerical errors could be corrected by an ordinary school boy, but others only by individual information. Members would be rendering great service by sending to the Secretary authentic corrections. There was another class of defect for which the Register was not to blame at all. Several gentlemen passed through the curriculum, obtained their diplomas from the College of Surgeons, and went into practice as partners or assistants, but did not register themselves. Such were in a false position. They were not legally qualified to enter upon their practice until they were registered. He knew of at least one or two in the Western Counties. Some present were also acquainted with them, and if they would call their attention to their position, they would be doing the unregistered individuals a kindness, and themselves a service. The non-removal of the names from the Register of dead members, called attention to by the Secretary, was a very difficult class to deal with, inasmuch as the duty of reporting them was thrown upon the registrars of deaths. But these officials did not know their duty in this respect. For instance, the names of three of the best known Liverpool practitioners, eight or ten years ago, who had been dead three or four years, had remained on the Register till now. It was not

only a duty of the registrars, but a privilege, because they received 2s. 6d. for every certificate they sent up. A considerable number of *bonâ-fide* practitioners who had died since the first issue had not been removed; and it was impossible to get their names off unless every individual member on the Association would undertake to do what lay within their province. If they knew of the death of any dental practitioner in the districts in which they severally resided, they would be doing a great service by appealing to the registrar of deaths, and getting a certificate forwarded to the Secretary. This was the only means they could adopt to secure the end in view. They must be willing to render personal service. The Secretary could not do anything. Then there was a similar question with those originally registered in connection with pharmacy. There were between 1,700 and 1,800 in the Register of 1887, and out of those he had a list of 300, not one of whom was to be found in the Chemists' and Druggists' List this year. The chemists and druggists got an Act in 1868, making it compulsory for them to be registered, and if a man was not registered, he was not legally a chemist. Out of those 300, there were ninety who were registered chemists in 1879, when the first Dentists' Register was printed, but who had since disappeared from the Chemists' and Druggists' Register, and the probability was that they were all dead, and yet they were all on our Register to-day. There was only one way of dealing with these as with *bonâ-fide* practitioners. If they knew of any deceased chemist in their district, and got a certificate, the name could be removed. They were not likely to get these names removed in the ordinary course, even if the registrars were alive to their duties, for this reason. When a chemist died, the person giving the information to the registrar, spoke of him as a chemist, and did not mention his being on the Dentists' Register. The registrar having no list, forwarded the name only to the Chemists' Register, and the name was struck out, while it remained on our Register. Besides these, there were over 200 names still on our Register, concerning whom he did not know what right they ever had to be on the Register. They were registered in connection with pharmacy, but were not in the chemists' list in 1879, and had not been in since. He did not know whether they had studied the 12th clause of the Dental Act, which empowered the registrar to employ a test by sending a registered letter. If this was not replied to within a specific

time, or if the letter came back through the Dead Letter Office, the name could be struck off. He thought they were entitled to put this clause into operation with regard to every one of those names. He wanted to impress upon them in particular, the subject as touching deceased individuals, and to urge them to get hold of certificates in all cases which came under their notice. This was the only way out of the difficulty, and the only way in which the Act could be put in operation in the future. Registrars, having regard to the fee, would be obliged for information. The Secretary said he had addressed a letter to the Registrar-General. This was all very well, but as a matter of ordinary course he did not suppose the official would take much notice of it. If he did, it would only be to remind subordinates of their duty. As long as a man's name was left on the Register, anyone could practise under the name. An unregistered person could carry on practice, and set the law at defiance, and they had no remedy while the name remained. He knew of several such cases, but it was impossible to do anything until the name was removed. The Register was the essential provision of their Act, the point upon which everything must turn, and they must make it a matter of personal determination to get the Register in as accurate a form as possible, and keep it so. No one else would do it for them.

Mr. A. SMITH thought the meeting were indebted to Dr. Waite for bringing the matter before them, and for the information he had imparted. It was a very important question affecting every one of them. He did not, however, see how registrars could be obliged to send registered letters to the addresses of deceased persons.

Dr. WAITE said he did not propose this with reference to dead men. They might send letters to everyone supposed to be dead, but the other method was far more prompt. If they sent registered letters, they had to wait three months for a reply; but if they got a certificate and sent it up, the name could be struck off at once.

The CHAIRMAN said there could be no doubt as to the importance of this subject, which Dr. Waite had brought so plainly before them. He thought it became every one of them to keep their eyes open, and do their best to get certificates from their respective districts and send them to the Secretary of the Association. He did not see that they could make any motion in the

matter, which was one of private vigilance and activity, and they were standing very much in their own light if they did not act up to the suggestion which Dr. Waite had just given them.

No other gentleman made any remarks, and the subject dropped.

The retiring PRESIDENT then read the following address:—

GENTLEMEN,—The time has now arrived for me to surrender into your hands the important office with which you entrusted me at our last annual meeting, and in doing so I venture to hope that I have, at any rate, not suffered the prestige of this large and important Branch of the British Dental Association to be lessened by any act of omission or commission of mine.

As your President I congratulate the members on the satisfactory condition of the Branch as well financially as for the work done at their meeting at Exeter. I consider we were fortunate in having a series of eminently practical and scientific papers, such as any professional society might be congratulated on having addressed to them; and I think it no small sign of the flourishing condition of our Branch when the interest of our meetings is maintained in so satisfactory a manner. Mr. Tosswill's, on "Dental irritation, in relation to diseases of the eye," was especially one that would commend itself to us, as demonstrating how much one branch of surgery is dependent on other branches for mutual assistance, no matter what speciality we take up; but where there were so many, and all more than excellent, it is unnecessary and might be tedious to allude to all; I cannot, however, let this opportunity slip without making mention of Mr. Ackland's paper on Anæsthetics, which brought before us *cocaine* in a prominent manner.

This leads me to remind those of us who are members of the Odontological Society, of the very exhaustive and interesting papers read on this subject during the last session of that Society, and, in particular, those read at the May Meeting by Dr. Cunningham and Mr. Hern, which led to the issue of a paper of questions to elicit our individual experiences of the use of cocaine, and asking further, if we will, between this and the November meeting, tabulate our experience and enable the Society, by the consensus of information thus obtained, to arrive at definite conclusions as to the place and value this drug shall hold in the materia medica of the dental surgeon.

I have since our last meeting used it successfully in many cases, and hitherto have had but two or three which could raise any question as to its value as a local anæsthetic, and have not yet met with any case in which its toxic effects prominently manifested themselves; I have, however, up to last June not kept any notes to which I can refer, but I now carefully note and tabulate all phenomena as well as results. I trust that the appeal for information recently issued,

will, in the accumulation of reliable statistics, guide us in the use of what I hope may prove a boon to our patients, as well as ourselves ; and I would urge on all who are interested in the matter (and who of us is not ?) to assist the Odontological Society in this effort, by sending them their experience of the use of the drug, during the interval between this and November next.

I know there are some amongst us who would eliminate from these meetings the reading and discussion of scientific papers, and confine themselves to matters relating only to, what I may term, dental politics, but I think that our reunions would soon dwindle down to very limited proportions, and interest in the transactions of the Association would soon cease, should scientific subjects be excluded from our consideration.

The Odontological Society is not within reach of all of us ; not to speak of its not being open to all, we cannot all spare the time for the necessary visits to London to take part in its transactions ; but it is pleasant and convenient to have these meetings in our own districts, almost, so to speak, at our doors, at which we can interchange our country experiences, and these extending, as they do, over a wide area, ought to give us something in the year to yield us instruction.

I have a great desire to see more than one meeting in the year, for reading and discussing papers in our Branch, and I do not see why we should not arrange it, as some of the other branches do. Our annual meetings give us ample material for such an arrangement. At our last meeting, that at Exeter, we had, without mentioning demonstrations, seven papers of interest ; this is really too much for the mind to properly assimilate in one day. We are now fortunate enough to have six on our list, and I must say, glad as I am to see such evidences of vitality, that if we could give two days, or take half to-day and the rest on a future day, I think it would be a very good idea. Your council meet once between the annual meetings, at a town selected in our district ; and that might be utilised as a day for a meeting of the Branch, for reading and discussing papers, with mutual profit ; and give also an additional motive to your Council to turn up strongly on the occasion.

The nation has just passed through a most auspicious celebration of the Jubilee Year of our most gracious Queen and Empress, Victoria, and it will be something for me to remember the date of my Presidency by, that it occurred in what will assuredly henceforth be called, "Jubilee Year !" If we have made no improvements or advance specially to mark the year in our profession, yet to look back fifty years, what gigantic strides we have made ! Fifty years ago gold stopping was practised by but few, comparatively speaking : a few days since I had a gentleman in my operating chair who shewed me some gold stoppings put in fifty years ago by Thos. Sheffield. It is true they were perfect, bright and good, but under what dis-

advantages my good predecessor had laboured in putting them in ? The means of placing the hard gold fillings, such as we can effect now, were not dreamt of then ; we had no rubber dam, no beautiful preparations of gold, no automatic or electric mallets, no dental engine with all its perfect equipments, and for extractions, no adjusted forceps ; the few instruments procurable were clumsy, the key was the one most frequently used, and for lack of being able to purchase better, home-made excavators and pluggers, even as late as my first acquaintance with dental surgery, were, by many operators, exclusively used.

As to artificial work—the lack of mineral teeth compelled the use of natural ones (which came from sources that would not bear investigation, and when mounted on a gold plate would not last, but became disgustingly decayed in the course of a couple of years), while cases, for which we should now employ vulcanite, were laboriously carved out of hippopotamus or walrus tusk, which perished indeed in the using, almost faster than the natural teeth which were fitted into these bases ; thus, although we turned out “a thing of beauty,” after all our pains, it was anything but “a joy for ever.”

Fifty years ago anæsthetics were unknown, but we now have chloroform, ether, methylene, nitrous oxide, and cocaine ; and let me say, in passing, two of these at all events, if not discovered by men in our branch of the profession, owe their mode of usage and popularity to experiments made by dental surgeons. We have also the most delicate instruments with which to prepare our cavities and build up fillings ; all these appliances not only aid in our professional work, but by how much the patient is spared, only those who were sufferers fifty years ago, can tell !

It remains for me now to express the very great satisfaction it gives me that you have, as my last Presidential act, empowered me to send off the handsome contribution you have just voted to the funds of our Dental Benevolent Fund, in accordance with the appeal I made in my address to you last July ; in doing so, you have advanced materially one of the objects we had in starting the Association, and to what more worthy object than the relief of distress could we devote any superfluous balance we may possess ?

I must also thank all the members for the consideration they have shown me during the year I have held office, and especially the gentlemen on the Council and our very hard working Secretary, whose invaluable assistance has at all times been available to me, not alone in conducting the business of the meetings, but in consultation on business matters, which are constantly arising in connection with an association such as ours.

I now abdicate in favour of the very genial and accomplished gentleman who is to be my successor, and I trust his year of office may be marred by as few disagreeables, and meet with as many pleasurable incidents as have fallen to my lot.

The retiring President, whose address was listened to with much attention and interest, then vacated the chair in favour of the President for the ensuing year, Mr. E. Apperly.

Mr. T. CHARTERS WHITE now rose, and said he had a very pleasant task to perform, namely, to propose the following resolution: "That the best thanks of this meeting be given to Mr. Browne-Mason for his services as President during the past year." Those of them who had the pleasure and privilege of being at Exeter last year, would remember the admirable manner in which that meeting was carried out; and while giving every credit to the Secretary of the Branch there, he thought their best thanks were due to him who filled the presidential chair so ably, so well and so hospitably. One of the most enjoyable features of the meeting—at least to him, being a visitor and stranger to the place—was the excursion which Mr. Browne-Mason organised. He did not think he should ever forget the beautiful scenes, the nice spread upon the turf, or the animated discussion which took place around the festive board, or festive turf. He only wished he could have taken an instantaneous picture. The meeting ended very successfully and enjoyably, and everyone separated with a feeling of regret that they could not have another day like it; therefore he had no hesitation in proposing that their best thanks be given to Mr. Mason for the manner in which he had conducted the business of the Branch during the past year.

Mr. RICHARD ROGERS had very great pleasure in seconding the vote.

On being put to the meeting, the vote was carried with acclamation.

Mr. BROWNE-MASON, in responding, said he was very grateful to them for the confidence placed in him. His poor services as President had been very willingly rendered. He assured them that he was very much obliged to them for their vote of thanks.

The President, whose advent to the chair was the signal of renewed applause, then read his address as follows:—

GENTLEMEN,—While thanking you most heartily for the great honour you have conferred upon me, in electing me as president of this Branch of the British Dental Association, I confess it is with some sinking of heart that I take up the responsibilities which have just been laid down by our esteemed and worthy friend, Mr. Browne-Mason; and I only trust his mantle may fall on me, and that our meeting here may be as worthy of pleasant remembrance as our gathering under his auspices last year. At the risk of appearing

stereotyped, I must confess to a very deep sense of my unworthiness to fill so honourable a post, especially this year, when everything is expected to be a little above the usual mark; we hear of Jubilee funds, Jubilee meetings, and Jubilee dinners, and I certainly feel you ought to have had a Jubilee president.

Those gentlemen whom I have the honour to know as personal friends will tell you that I am in no sense of the word a public man, so I must crave your indulgence. Apart from this, it is a great pleasure to me to bid you welcome to our little town, though here again I feel at a disadvantage; we cannot boast of sacred piles of noble architecture, and historic interest, like our friends of Exeter and Hereford, nor of a world-wide reputation for beauty and fashion, like our Torquay and Cheltenham brethren. Still we are not without claims to interest for the lover of nature, the scientist or the archæologist; I candidly admit our town is not beautiful, but if there were time for exploration, I think you would confess that our surroundings are hard to beat, and though nothing has occurred to connect Stroud with the historic events of recent centuries, yet in earlier times many things of deep interest must have transpired in this neighbourhood. There are evidences of an important Roman settlement in the adjacent village of Woodchester, and local nomenclature preserves the memory of hard fought battles in the stormy times of Danish invasion. Whatever may be our disadvantages we shall not, I hope, fall much behind the other towns you have visited in bidding you a very hearty welcome, and I trust your visit here may be a success from a pleasurable as well as a professional point of view.

As our time on these occasions is generally limited, I do not intend trespassing upon it by lengthening out my address, and therefore I shall only touch upon a few things which are rather of a practical nature, and which I think demand the attention of each member of our profession. As our knowledge extends, and we become more alive to the possibilities and responsibilities of our own branch of the medical profession, fresh subjects of increasing interest are continually presenting themselves to our notice, hence the great value of meetings like the present, offering opportunities of interchange of knowledge and experience, and giving facilities for discussion.

All of us who were able to attend must remember with pleasure the meeting of the Association, held last year in London. We enjoyed that personal intercourse which is always helpful as well as pleasant, and were brought into contact with the most eminent men of our profession—those who have done so much to raise it to its present improved position; then the papers read were most interesting, especially useful was the one by Mr. Morton Smale, on "Dental Education;" the information given in it was, and will be, most helpful, especially to those who have sons whom they wish to bring up to the

dental profession. Such assemblages will benefit us all, and will have their effect in helping to stamp out much of the charlatanism and unprofessional conduct which, I regret to say, is still rife.

But possibly not the least advantageous of these gatherings is the little opportunity for recreation they afford. I think you will agree with me that very few men require more, and get less, recreation than we do, as a body. Our profession is one that draws largely on brain and nerve power, to say nothing of the heavy physical strain to which we are subjected. I have often thought that if we could get a series of photographs of the various positions in which we have to work, in the course of a busy day, and note the length of time for which each is sustained, we should probably be edified and amused, but above all, astonished, that we are alive and at work after so many years of it. Now a good deal of this is irremediable. We cannot do our duty to our patients or our profession without a large outlay of interest and energy, but we can do our utmost to counteract the evil I have suggested by judiciously chosen recreation.

I think every dentist should spend as much as possible of his leisure time in the open air, and if he can take up some out-door hobby, so much the better. There is nothing better than every-day horse exercise, for those who have liking and opportunity for it, and I think there are a good many gentlemen present who will agree with me in this ; but tennis, boating, fishing—anything that diverts the mind and invigorates the body—will answer the purpose.

There is another matter effecting the health and energy of the dentist, which is not, I think, sufficiently studied, and that is, the ventilation and comfort of the operating room. No man can work long or well in a small, ill-ventilated, over-heated room, therefore we should pay great attention to the airiness and pleasantness of the place in which we have to spend so large a portion of our time—and it is desirable also for patients that these things should receive attention ; cheerful and pleasant surroundings, with various objects to interest and amuse, will do much to mitigate the nervous horror with which so many regard a visit to a dentist, and to obviate the irritability and restlessness which are so often consequent on prolonged dental suffering.

It is certainly cheering to look round and see what advances have been made during the last few years with regard to these matters. There have been many inventions for our own convenience, and our patients' comfort, without which we should now feel it almost impossible to work, though many of us can remember what it was to operate with an ordinary easy chair, without rubber dam, engine or stool. We are thankful for these advantages, not only because they save labour, but because they render it more possible for us to cope effectually with the largely increasing amount and variety of dental suffering.

The over work and anxiety of these days of keen competition in the

adult, and over education in the young, combine to produce weak digestions, and nervous exhaustion, and these, in nine cases out of ten, react upon the teeth and produce the various diseased conditions of the mouth which are daily brought under our notice; I think dentists should certainly join with the rest of the medical profession in lifting up their voices against the over pressure that in so many cases undermines the health of the rising generation; and we should also lose no opportunity of impressing on parents the necessity of early attention to their children's teeth, in the matter of daily care and cleanliness, as well as periodical visits to the dentist.

And now I should like to say a few words on the mechanical part of our work; there seems to be a growing inclination on the part of our younger members to rather ignore this branch of our profession and look favourably on the idea that there is a time coming when it will be entirely relegated to skilled assistants, and the operator no longer required—in their phrase, to “soil his hands” with it. Now I feel strongly that so long as we retain the making and fitting of artificial dentures, regulating plates, &c., &c., as part of our dental practice, so long it *must* be the duty of every practitioner to thoroughly perfect himself in every detail of it, and bring the same amount of study and science to bear upon it as on any other part of his work.

Three years' practical familiarity with the details of mechanical dentistry is little enough, and I trust this period will never be curtailed. No one speaks slightly of the modelling clay and the sculptor's chisel, and why should the plaster of Paris and the file be held in less estimation? especially when the health and comfort of so large a portion of the community depend on their scientific and skilful use. But I do not intend to trespass further on your time and attention: there are many subjects of interest, such as the use and abuse of cocaine, and the government appointments of dental surgeons in the army and navy, and public institutions, on which much has been, and might still be said, but I think more will be gained by general conversation and discussion on these matters, than by anything I could bring to your notice. I trust you will not think my address unreasonably short, but I have purposely curtailed it feeling sure you would exclaim against lengthy remarks on this occasion, having had a multiplicity of words recently from other quarters.

I will only once more thank you very heartily for the honour you have conferred upon me, and express my earnest desire to do my best for the advancement of the interests of the Association during my year of office.

Mr. BROWNE-MASON proposed a vote of thanks to the President for his able address. There were many points in it which ought to strike home to all of them. Dental hygiene was a subject with

which he felt very much sympathy. If they remembered, Dr. Shapter, who returned thanks for the medical profession at the Exeter dinner, suggested that he thought a very important subject for their discussion would be what he termed dental hygiene; the importance of bringing more prominently before parents and guardians the necessity of early attention to the teeth and of watchfulness, with a view to mitigating the evils of future disease. It was a subject the importance of which many of their patients did not recognise. How often did parents bring children at fourteen and fifteen with mouths in a dire condition, owing to early neglect. Their President's address was eminently practical. They were very much indebted to him for it, and he had great pleasure in proposing a vote of thanks to him.

Mr. COOKE PARSON seconded the proposal with very much pleasure. He had been struck at the President's remarks as to the care they should bestow upon their own health. It was essential that their health should not break down, and now that they were entirely confined to the house all day, it was more than ever necessary that they should have as much out-door exercise as possible.

The vote having been warmly accorded, the President briefly responded.

PAPERS AND DISCUSSIONS.

The first subject treated of was, "Gutta Percha as a Filling Material," by Mr. W. H. Waite, who spoke without notes. He remarked that gutta-percha was first introduced to dentists between thirty-five and forty years ago, and was at that time the ordinary article of commerce, identical with that used for soleing shoes. This appeared to have answered the purpose remarkably well, excepting as regards its appearance, which was, of course, unsatisfactory. He had seen numbers of sailors with brown gutta-percha fillings, which had lasted well considering the rough usage. After a short time the preparation which they knew as Hill's stopping was introduced. The great advantage which gutta-percha possessed might be summed up in two or three words. It had a remarkable power of arresting decay, which everyone must have noticed who had used it to any extent. Even when the filling itself had perished and almost disappeared from the cavity, as a rule they found no further progress made with the disease. Another advantage was its good colour. Other

advantages were the ease with which it was introduced, and its non-conducting property. On the other hand, there were many disadvantages, including the rapidity with which it wasted away, and among lower grades its liability to bulge out of the cavity and become unsightly if in the front of the mouth. The composition of gutta-percha was pretty well understood, and yet it was surprising there were so many who did not know what the ingredients were. Ordinary brown gutta-percha was first bleached by a very simple process, and then incorporated with a certain proportion of inorganic matter. The American manufacturers contended for oxide of zinc, which they said was the most durable that could be worked in. The point, the Americans said, was to make the maximum amount of heat required, for softening with the minimum of inorganic matter, and they believed this could best be accomplished with oxide of zinc. He had made an examination of two or three of the American preparations. The result proved that Hill's stopping contained oxide of zinc, together with a small amount of colouring matter; the proportion by weight was $77\frac{1}{2}$ per cent., and they would observe in the specimens handed round how small was the bulk in proportion to the weight. The Premium contained seventy-five per cent.; a little more colouring matter and a little less oxide of zinc. Oxide of zinc was the heaviest material that could be worked in; the bulk, therefore, was in inverse proportion to the weight. Flagg's contained 85 per cent. of oxide of zinc by weight, with correspondingly less bulk. These were the three principal American makes. The preparation most familiar on this side of the Atlantic was Jacob's stopping. This did not contain oxide of zinc, and he could not exactly tell the composition. It went by the name of china clay. The proportion of inorganic matter by weight was only 25 per cent., but they saw how enormous the bulk was in proportion to the weight. The bulk was scarcely diminished, thus showing that the material employed was very light indeed. The relative value of these kinds of gutta-percha was determined by what was called the grade. The lower grade became soft from 150° to 180° —Hill's and Premium were both low grade—and could be used over hot water. The medium grade became soft at from 180° to 212° . These latter required for thorough softening more heat than could be got from boiling water, and also very nice manipulation. The instrument should be warmed as well as the material. Everything in the manipulation of gutta-percha as a

filling depended upon the care with which it was warmed, and he had been quite surprised to learn how many operators were in the habit of warming it just over the flame of a spirit lamp. If required only for a temporary filling it would not be of much importance, but if the best results were desired it was of the most vital importance. It required to be warmed gradually, and for this purpose there must be an apparatus for warming it. The gutta-percha should be put on before the heat was supplied, so that after the lamp was lighted it warmed the material thoroughly. By putting the percha over the lamp the surface was very well softened, but the inside remained hard and obstinate, and it was impossible to get perfectly easy manipulation. If, on the other hand, they went a little further and overheated the surface they raised it to a point of heat at which the virtues were lost. The material became rotten at a temperature of 240° , and it was not safe to raise it above 220° . If raised above that point the probabilities were that a great deal of the virtue would be gone out of it. Careless heating often destroyed some of the best properties. Low grade gutta-percha could never be depended upon for anything more than temporary stoppings. This was true of the white material, but the red material, which was becoming known here, but which had long been known on the other side of the Atlantic, was very fairly durable and answered very well for temporary purposes and cavities, where they might wish to carry on treatment as long as possible. The only objection was the colour. The latest form of heater (exhibited) was Dr. Flagg's, Philadelphia. It had no water, but was a dry heat apparatus. It had three decks: the top one for low grade, being furthest from the flame; the middle one for medium grade; and the lowest for heating the instruments and also for annealing gold foil. In using medium grade it was desirable to have the instrument quite warm—as hot as they could hold, and the gutta-percha was to be cut up very fine and worked together very much as they would pack together little portions of cohesive gold foil, so as not to require much smoothing. There were two kinds of cavities for yielding the best results. The first were interstitial cavities in the front teeth, where the teeth were close together and required separating, where the walls of enamel were pretty good, and when the teeth came together again, the cavities were not exposed to mastication or cleaning. In such cases it appeared to him that they could render most valuable

services for persons who could not afford to pay fees for gold filling. They could render quite as effectual service with gutta-percha, and at very much less cost. The other class of cavities were buccal grooves, in molars where the nerve was almost exposed, and where they could get very little hold for any kind of filling, and where they would deem it an almost hopeless case. He had seen most satisfactory results, even when close down on the margin of the gum.

Mr. JOHN HAY spoke of the convenience of the spirit lamp in warming gutta-percha, and thought the disadvantage which had been alluded to might to a great extent be overcome by commencing to hold the material at a distance from the flame, and lowering gradually until they got it sufficiently softened, as it was brought lower down and nearer the flame. To those who preferred the spirit lamp, he thought this mode would ensure softness, and avoid any decomposition or spoiling of the percha. As to the practical value of the material, he could say, speaking from a great number of years' experience, that he was indebted to gutta-percha in many cases, which could not be met by any other kind of stopping. Its durability under unfavourable conditions—in his experience, as doubtless in that of many others who used it—had proved it worthy of more than temporary use. One case he remembered distinctly, where the remainder of a gutta percha stopping, which had been put in twelve years before, was found in the cavity of the tooth. He was sure they owed a debt of gratitude for the makers of these stoppings, especially to Mr. Jacob for his preparation.

Mr. T. COOK PARSON said he must thank Dr. Waite for his information. He had been in the habit of using Jacob's preparation, and warming it with a little can made for the purpose and brought out many years ago, with boiling water beneath. This did not over heat or spoil the material, but on the other hand the heat was hardly sufficient to enable one to use it nicely. Dry heat used in the way stated was certainly a great improvement.

Mr. BROWNE-MASON said he had used an arrangement brought out by Dr. Flagg, but he did not then know the cost, because the warmer was filled with water, and he found that unless he was very careful the water boiled over, and if once the material got wet it was utterly valueless. Gutta-percha was very easily ruined by actual contact with the flame. There could be no

doubt to those who used it of its value. He had lately been using Dr. Flagg's own gutta-percha, and was very pleased with it during his short experience, although he could not yet compare its wearing properties with those of Jacob's stopping, which was far the best of English gutta perchas.

Dr. WAITE, in a few concluding remarks, said it was essential that the inorganic matter should be thoroughly incorporated with the gutta-percha. When made in large quantities, it was stirred with an iron spoon, but Dr. Flagg insisted that it should be thoroughly well kneaded with the hands for an hour after it might be supposed to be well incorporated.

(To be continued.)

The Benevolent Fund.

THE following new subscriptions and donations to the Benevolent Fund of the British Dental Association have been received by the Treasurer since January 1st, 1887:—

	Subscriptions.		
Anonymous (per James Parkinson, Esq.)	1	1	0
Bullin, F., White Friars House, Chester	2	2	0
Bateman, G. W., 99, Ladbroke Grove, Notting Hill, W....	1	1	0
Brown, H. W., 1, Lyncombe Villas, Uxbridge Road, Ealing, W.	1	1	0
Clifford, Isidore E., 8, Grosvenor Street, W.	1	1	0
Clifford, R. E., 8, Grosvenor Street, W.	1	1	0
Elliott, Dr. W. St. George, 39, Upper Brook Street, W. (<i>increased from £1 1s.</i>)	2	2	0
Hepburn, D. Stuart, 9, Wellington Circus, Nottingham ...	0	10	6
Matthews, A. Alex., 5, Mount Pleasant, Bradford ...	0	10	6
Styles, Edwin, 41, Camden Road, N.W.	1	1	0
Watson, Charles, 151, Grove Lane, Denmark Hill, S.E....	0	10	6
	Donations.		
Brunton, George, Hillary Mount, Woodhouse Lane, Leeds (<i>in addition to subscription</i>)	1	1	0
Browning, Daniel, 27, Upper Montague Street, Hyde Park, W.	1	1	0
Bradford, and District Dental Association	2	2	0
Mallan, G. Prescott, 30, Monmouth Road, Westbourne Grove W. (<i>in addition to subscription</i>)	2	2	0
Midland Branch of the British Dental Association ...	10	10	0

APPOINTMENT.

H. G. READ, M.R.C.S., L.R.C.P., L.S.A., L.D.S., has been appointed Dental Surgeon to the Metropolitan Hospital.

ORIGINAL COMMUNICATIONS.

On Bridgework.*

BY H. W. TRACY, L.D.S. EDIN.,

PRESIDENT OF THE EASTERN COUNTIES BRANCH.

As our time is somewhat limited to-day, I shall not trouble you with a long paper, and do not intend to advance anything new, but would rather call the attention of our members (particularly the younger ones) to several new departures which have cropped up during the last few years.

In the first place I would mention "bridge work"; you will all agree that it has a most efficient and comfortable look in the mouth, when done well, and if we could only control the various living structures with which we must come into contact, it would undoubtedly be a great success, and a step in the right direction.

In my opinion the operation will never be of any great advantage, for the following reasons:—

In fixing "bridge work" we anchor a piece of work to one or more teeth or stumps, and as every tooth or root should have an independent movement, it stands to reason that one tooth cannot be anchored to another without compelling it to move more or less in the same direction, which would be fatal to the stability of the whole work.

Again, although a very small portion of the gum is covered by this system, still there is a portion which has to get rid of its dead epithelium, as well as any other part, and I have found in practice that around that portion, thus covered, there is always more or less inflammation which cannot be readily reduced, but which could be done in an ordinary denture by removal when necessary.

We can hardly call this a new system, as I have with me a case, lent to me by my brother, Mr. N. Tracy, for the purpose of shewing you, which has been in his possession upwards of twenty-five years.

I would next like to call attention to the various new methods of pivoting teeth; you have had them so well described to you that I will not lose time by repeating them.

As the object in replacing teeth is to represent nature as closely as we can, both in usefulness and appearance, I ask you,

* Delivered at the Annual Meeting of the Eastern Counties Branch, July 5th, 1887, at Bury St. Edmunds.

do we gain anything in the new complicated methods now employed?

My experience has been that all flat teeth with a metal back have a dense look, especially by artificial light, and lose all the semi-transparent appearance which a living tooth has. This, I think, can be best obtained by using a tube tooth and gold pin, varying the preparation of the root as may be necessary; this is by far the least tedious for the patient, giving the desired translucent look either by day or artificial light, and the contour of the lingual portion of the tooth can easily be made to resemble the contiguous teeth, which in some very sensitive mouths is of some importance.

I frequently meet with cases which have been done this way by my late father and my brother, which have been successful for twenty-five or thirty years. In making these remarks I do not wish to depreciate in any way the Bonwill crown, for I consider it a beautiful and efficient way of restoring molars and bicuspid.

I will next call attention to the new method of electro-gilding of vulcanite plates. I must confess I have had no experience in this new departure, but I wish you to understand that the remarks I am making to-day are not for the purpose of advancing my own views, but to induce you to think out thoroughly the pros and cons of these new methods.

In adapting lower dentures to a sensitive mouth, my experience is that you can never, or hardly ever, arrive at a comfortable adaptation at the very first. Now, it seems to me, that in electro gilding, if the lower piece has to be lowered in the least degree, you must cut away the gold covering, and in consequence you destroy the effect you desire to produce. In these cases where vulcanite cannot be worn, would it not be better to at once make a gold plate, which can be altered if the pressure is found to be too great in certain places.

In regard to plating vulcanite upper, considering the time and trouble, I would suggest at once making a gold or metal plate.

My remarks have been very much of a mechanical nature, but, at the present time, I think, there has been a tendency to go in for scientific and conservative treatment of the existing teeth and rather to neglect the mechanical part of the profession, and as long as the mechanical part of dentistry is associated with operative dentistry, I think it is only right that we should do the most thorough work we can in this branch as in the other. I

had intended to speak on the subject of cocaine, but want of time prevents me doing so ; but I cannot let the opportunity pass without saying I think we all ought to thank Dr. Cunningham for his very carefully prepared paper on the subject read at the Odontological Society, and think that if we cannot get better results from the drug and greater freedom from unpleasant effects, we had better stick to Nitrous Oxide Gas.

Thanking you, gentlemen, for your patience, I will now conclude.

The Uses of Styptic Colloid in Dental Practice,

BY R. DENISON PEDLEY, F.R.C.S.ED., L.D.S.ENG.,

DENTAL SURGEON TO THE EVELINA HOSPITAL FOR SICK CHILDREN,
SOUTHWARK.

COLLODION and Tannic acid have long found a place in the Dental Materia Medica. The former as a solvent for creosote, carbolic acid, iodoform, &c. The latter for its valuable astringent properties in coagulating blood and albumen. In combination these drugs have uses which are of some importance.

Collodium stypticum or Styptic Colloid (as introduced by Dr. Richardson), is a saturated solution of tannic acid and gun cotton in absolute alcohol and pure ether, with the addition of a small quantity of tinct. benzoin.

This is one of the most valuable styptics in severe hæmorrhage after tooth extraction. When introduced into the sockets on cotton wool it rapidly becomes a solid plug not to be washed away by the fluids of the mouth. In this way it has the advantage of an astringent, besides exercising mechanical pressure, especially if a small roll of lint is placed over the plugged socket and the patient made to close the teeth upon it. Advantages, by the bye, which cannot be claimed for other styptics.

When Styptic Colloid is mixed with china clay or zinc oxide into a paste on a glass slab (as osteo fillings are prepared) it sets hard and quickly, and by experience has proved a valuable stopping.

1. As a permanent root filling introduced on wisps of cotton wool, very fluid (with instruments, the points of which may be oiled to prevent adhesion) and dried with the hot air syringe.

2. For permanently fixing pivot teeth it has been used with perfect success.

3. As a temporary stopping it may be used for all teeth excepting the labial surfaces of incisors, as on setting it becomes dark in colour without however staining the tooth substance.

In extremely sensitive teeth, where one finds some difficulty in removing all softened dentine. In the teeth of children and young adults, where decay is rapid and chalky, the stopping seems to alleviate pain, arrest decay, and harden decalcified tissue.

This stopping may also claim some value for its permanency. Its adaptability to this end was pointed out to the writer by his father, Mr. George Pedley, and may be illustrated by the following case in practice. The posterior surface of a very sensitive upper canine was filled for a patient, who promised to return within a few weeks, in order that the tooth might be permanently stopped. The patient went to Paris and did not put in appearance till eighteen months had elapsed. The stopping was found to be hard, sound and polished, and the tooth perfectly comfortable.

HOSPITAL REPORTS AND CASES IN PRACTICE.

Gouty Periostitis.

BY JAMES RYMER, M.R.C.S., L.D.S.Eng.

HAVING had several cases recently which evidently belong to above class, I thought as gouty periostitis is not mentioned even in our recent dental text books it might be interesting to some if I described what appears to me to be a typical case, viz. :

History.—John B——, æt. forty-five, came about two months ago to the National Dental Hospital, complaining of a continuous wearing pain confined to alveolar margins of upper and lower jaws; the pain differed from ordinary periostitis, viz., it was not worse on lying down, and not affected in any way by heat and cold; this condition had prevented the patient from sleeping for four or five weeks.

Examination (local).—Mouth in fairly healthy condition, patient had lost only two or three teeth, and these from caries; other teeth, although free from caries and tartar, were abnormally ground down, suggesting gout; the gums were slightly congested, more especially at the alveolar margins, the free edges being a little more pouched than normal, with slight accumulation of pus, which at first sight suggested early pyorrhœa alveolaris, but on examining more carefully, the alveoli were not exposed, nor could a fine probe be directed between the fang and socket of tooth; all the teeth were slightly loose, but gave no great pain on pressure.

Patient's History.—For years he has suffered much from gout, fingers much deformed with chalky deposits, and tophi on ears and reedy nails, &c.

Treatment Locally.—Strong counter irritant, chloride of zinc, 60 per cent. solution.

Internally.—Iodide of potassium, starting at two grains, in a few days increased it to five.

Result.—At the end of first week there was a decided (although slight) improvement, both as regards pain and locally. I saw him again between the third and fourth week, after commencing treatment; he assured me he was free from all pain, and his gums and mouth now were in a thoroughly healthy condition.

Remarks.—In this case it was necessary in the diagnosis to exclude intrinsic calcification of the pulp and nodular exostosis; against these one could not localise by reagents the pain to any particular tooth or teeth; next, one had to put aside commencing necrosis of jaw, depending upon the numerous causes; there was no history to support any necrosis. Lastly—What was the cause of this pain, &c.? It appears to me without any doubt to have been due to inflammatory and gouty infiltration of the alveolar dental membrane, and as this membrane runs for a short distance up the apical foramen, so we get pressure on the nerves to the several teeth. No tooth required to be removed, and so I could not examine the membrane microscopically.

I have had three other cases of gouty periostitis, only not so well marked as the one above described; the treatment was similar and the results good.

MINOR NOTICES AND CRITICAL ABSTRACTS.

The Queen v. The General Council of Medical Education and Registration.

WE append the *Times* report of the decision of the Court of Appeal in this case, and our readers will see from a perusal of it that the result of the appeal has been to render perfectly clear certain legal points with regard to the duties, powers and responsibilities of the General Medical Council, and thereby a valuable result has accrued from the trial. The Master of the Rolls, while ratifying the previous decision of Justices Mathew and Smith, made a very significant statement, namely, that though

the *mandamus* must go, "the fact of its going would not take away the power of the General Medical Council to exercise their jurisdiction under Sections 13 and 16, and if on inquiry the Council came to the conclusion that the applicant had, by breaking the conditions imposed upon him by the local medical body, been guilty of disgraceful professional conduct (and if he wilfully broke the condition, his professional conduct might be thought disgraceful), they would erase his name from the Register."

Such a decision, the *Lancet* points out, increases the responsibility of the Council, while diminishing that of the licensing bodies.

The present position of affairs is anomalous, to say the least of it. The name Mr. Partridge is to be restored to the register, though his registrable qualification has been withdrawn.

"THE QUEEN *v.* THE GENERAL COUNCIL OF MEDICAL EDUCATION
AND REGISTRATION.

"This was an application on behalf of Mr. H. F. Partridge for a *mandamus* to the General Council of Medical Education of the United Kingdom to restore his name to the register of dentists kept under the Dentists Act, 1878. The facts were shortly as follows:—The applicant had practised as a dentist in the metropolis since 1867, but he never registered in respect of this qualification. In 1878 an Act was passed requiring dentists to be registered under that Act, the General Council of Medical Education of the United Kingdom being made the governing body. In 1878 Mr. Partridge obtained from the Royal College of Surgeons in Ireland a diploma in dentistry, and as a licentiate of this body, which was one of the medical authorities referred to in the Act, he applied for and procured registration under section 6 of the Act. The diploma had been granted on the terms that the holder should not seek to attract business by advertising or by any practice considered by the College unbecoming, and that the diploma might be cancelled on its being proved to the satisfaction of the President and Council that he had done so. In 1885 the Royal College of Surgeons in Ireland cancelled the diploma on the ground that Mr. Partridge had advertised for business, and upon this being brought to the notice of the General Council, they directed his name to be erased from the register. It was argued for Mr. Partridge that the General Council had only power to erase his name for some cause specified in section 13, which provides that where a registered person

has been convicted of an offence, which if committed in England would be a felony or misdemeanour, or been guilty of any infamous or disgraceful conduct in a professional respect, that person shall be liable to have his name erased from the register. It was argued on behalf of the General Council that section 11 bound them to keep a register, and that that must mean a correct register, and as the diploma, by virtue of which Mr. Partridge got registered, had been taken away, he was not entitled to be on the register. The Divisional Court (Mr. Justice Mathew and Mr. Justice A. L. Smith) held that the General Council could only erase his name for one of the causes specified in section 13, and made the rule for a *mandamus* absolute. The General Council appealed.

"Mr. KENNEDY, Q.C., and Mr. MUIR MACKENZIE, for the General Council, said that the applicant, if his name were not erased, would be able to practise anywhere, even in Dublin, though his diploma had been taken away in Ireland. He might, therefore, laugh at the College of Surgeons in Ireland. There had been no inquiry as to whether the applicant had been guilty of disgraceful conduct in a professional sense within section 13. That section applied to a case where the person still had a diploma. The Council were bound to erase his name from the register when his diploma was taken away, and no express provision to erase his name was necessary.

"Mr. Finlay, Q.C., and Mr. Lyon, for the respondent, were stopped.

"The COURT dismissed the appeal.

"The MASTER of the ROLLS said that the General Council had erased the applicant's name from the register simply upon the ground that his diploma had been taken away by the Royal College of Surgeons in Ireland, and without any inquiry by the General Council under sections 13 and 15 of the Dentists Act, 1878. Whether they had power to do so depended upon the terms of that Act. Section 6, which provided as to the qualifications of a person entitled to be registered, dealt with the qualification at the moment of registration. 'To be registered' meant 'to be put on the register.' Section 7 showed that that was the meaning of those words. That disposed of the meaning attempted to be placed on section 11. The first part of section 11 must apply to the time of putting the name on the register. Subsection 3 dealt with a 'copy' of the register and required

a correct copy to be printed every year. Sections 12 and 13 dealt with alterations in the register itself. Under section 13 a person's name might be erased from the register where he had been guilty of (among other things) disgraceful conduct in a professional respect. The General Council exercised their powers of erasing names under sections 13 and 15. Those sections showed that the power of erasure was a judicial power given to the General Council and confined to those matters into which they could make inquiries—namely, those cases specified in section 13. If disgraceful professional conduct was proved, the Council must erase the name. The mere fact that the local medical body had struck him off their register and taken away his diploma was no ground for the General Council erasing his name from their register. The principle of law applicable was that as the dentists' register was instituted by the Act of 1878 everything in relation to it must be looked for in the Act alone. His lordship added that the *mandamus* must go, but the fact of its going would not take away the power of the General Council to exercise their jurisdiction under sections 13 and 15, and if on inquiry the Council came to the conclusion that the applicant had, by breaking the condition imposed upon him by the local medical body, been guilty of disgraceful professional conduct (and if he wilfully broke the condition his professional conduct might be thought disgraceful) they would erase his name from the register.

“The LORDS JUSTICES gave judgment to the same effect.”

OBITUARY NOTICE.

WE regret to announce the death of Mr. F. Hall, of Rockferry, on June 18th, in his fifty-fifth year. Mr. Hall was a dental licentiate of the College of Surgeons and occupied the post of Hon. Dental Surgeon to the School Frigate H.M.S. “Conway.” Mr. Hall was a member of the British Dental Association.

ANNOTATIONS.

THE annual prize distribution of the Dental Hospital of London was held on Monday, the 21st of last month, at the rooms of the Medical Society of London, Chandos Street. Proceedings commenced by a reception of the visitors, in the unavoidable absence of Mr. Cartwright, by Mr. George Gregson,

assisted by other members of the staff, at 8.30. After the reception, the prizes were distributed by Professor John Marshall, F.R.S., President of the General Council of Medical Education. The following gentlemen received prizes and certificates:—Saunders Scholar—Mr. J. H. Badcock; Prize given by Messrs. Ash and Son—Mr. J. H. Badcock. WINTER SESSION, 1886.—*Metallurgy*.—1st Prize—Mr. J. H. Badcock; 2nd Prize—Mr. F. Lonnon; Hon. Certificates—Messrs. A. W. Frost, C. R. Morley and B. Saul. *Mechanical Dentistry*.—1st Prize—Mr. G. Seymour; 2nd Prize—Mr. R. H. Bates; Hon. Certificates—Messrs. H. A. Washbourn, A. W. Frost and C. R. Morley. SUMMER SESSION, 1887.—*Dental Surgery*.—1st Prize—Mr. J. H. Badcock; 2nd Prize—Mr. C. R. Morley; Hon. Certificates—Messrs. J. F. Colyer, R. H. Bates, H. A. Washbourn, W. H. Dolamore and F. A. Harsant. *Dental Anatomy*.—1st Prize—Mr. J. H. Badcock; 2nd Prize—Mr. W. H. Dolamore; Hon. Certificates—Messrs. J. F. Colyer, F. A. Harsant, R. H. Bates, H. A. Washbourn and C. R. Morley. *Operating Prize*.—1st Prize—Mr. G. Seymour; 2nd Prize—Mr. A. R. Colyer; Hon. Certificates—Messrs. C. R. Morley and H. Picton. *Students' Society's Prize*.—Awarded for Paper on Dental Anæsthetics to Mr. A. T. Croucher.

AFTER the distribution Professor Marshall briefly reviewed the progress of dentistry and dental education during the last decade, and strongly urged the necessity of union amongst the members of the profession, and pointed out to the students past and present the importance of registration as the only basis on which this union could be established. He congratulated the profession on the progress which had been made in this direction during the comparatively short time in which the Dentists' Register had been established, and trusted that the dentists of this country would not abate their efforts until all that could be done for the elevation of the profession had been accomplished.

Sir JOHN TOMES, in proposing a vote of thanks to Professor Marshall for presiding and for distributing the prizes, expressed his great satisfaction at being present on such an occasion, and dwelt on the obvious advantages which had accrued to the cause of dental education by its having been in a great measure incorporated with and carried on on the lines of medical education. He considered the presence of his friend Professor Marshall on this occasion as a proof of the interest which had

arisen in the minds of the leading members of the joint professions of Medicine and Surgery with regard to our speciality as a sure sign that our highest aspirations would ultimately be realized.

LATER in the evening a *conversazione* was held, at which some charming music was provided by Miss Amy Hickling (violin), and Messrs. Eric Lewis, David Hepburn, Alfred Smith and R. S. Fairbank. The arrangements were in every way satisfactory, and the evening quite a success.

At a recent meeting of the business committee, on August 4th, the following names were received as having been elected by the Southern Counties Branch :—G. A. Bullard, Croydon ; E. Dubois, Camberwell ; F. C. Mortimer, Portsea ; J. F. Rymer, M.R.C.S., L.D.S.Eng., London ; S. T. Silvester, L.D.S.Eng., Croydon ; W. T. Trollope, L.D.S.I., Tunbridge Wells. The following names were received as having been elected by the Western Counties Branch :—T. C. Colledge, Rowcroft ; J. L. Robertson, L.D.S.Eng., Cheltenham. The name of W. H. Hope, of Wellingborough, was received as having been elected by the Eastern Counties Branch. J. W. Dent, L.D.S.I., of Stockton-on-Tees, was elected a member of the Association by ballot.

ALL our readers will join with us in our sincere regret at the news that Dr. Bogue has found the strain of work for the Congress so great that it will be impossible for him to continue his duties as secretary, or even to attend the meeting. Whatever success attends the meeting will be largely due to Dr. Bogue's energy and tact, but his absence will be the price that must be paid for his labours. Like many other members of the profession, he has never considered his own health or comfort, when the interests of the community have been concerned, and the inevitable result has been that he has overrated his strength and overtaxed his powers. We are pleased to be able to add that rest and quiet will most likely soon restore the late secretary to his proper level of health.

ROYAL COLLEGE OF SURGEONS, EDINBURGH. During the July sittings of the Examiners the following gentlemen passed the first professional examination for the Licence in Dental Surgery :—Harry Brooke Dew, Somersetshire ; William Gray, Edinburgh ; George William Welham, London ; William Herbert Dennis,

London ; Henry Hepburn Chapman, Edinburgh ; and David Alexander Cormack, Edinburgh, and Harry Evelyn Mahonie Sheffield, passed the final examination and were admitted L.D.S. Edinburgh.

AT the July Sitzings of the Examiners for the Faculty of Physicians and Surgeons of Glasgow, Mr. William Hutchinson, Glasgow, passed the First Dental Examination, and Mr. William T. Maclin, Birmingham, and John G. Wallis, Hull, passed the Final Examination, and were admitted Licentiates.

BIRMINGHAM MEDICAL INSTITUTE.—At the last meeting of the Council of the Birmingham Medical Institute, it was resolved : “That any registrable dental practitioner is eligible for election as a member of the Medical Institute.” The Medical Institute, lying in the heart of the town, is a handsome building, recently erected, possessing a large and valuable library of medical and scientific works. The right of membership has hitherto been very exclusive, and the passing of the above resolution is a distinct recognition of the rights and position of the dental profession.

QUEEN'S COLLEGE, BIRMINGHAM, DENTAL BOARD.—Another feature in connection with dental education in Birmingham has recently been inaugurated by the formation of a Dental Board at Queen's College. The education of dental students has hitherto been undertaken by the Queen's College in conjunction with the Birmingham Dental Hospital, but there has always been a want of touch between the two bodies, in that the Dental Hospital possessed no direct representative on the Council of Queen's College. Invitations were recently sent to the representatives of the Clinical Board, the lecturers in the Dental Department of Queen's College, and the surgeons and assistant-surgeons at the Dental Hospital, to meet in the Professor's Room, to discuss the desirability of the formation of a Dental Board, when it was unanimously resolved that, in the interests of dental education, such a board be formed, subject to the approval of the Council of Queen's College, and that in addition to the staff of lecturers a dental tutor be appointed. The Council at once agreed to the proposal, and Mr. Frank Hampton Goffe has been appointed dental tutor.

At a meeting held on May 26th, Mr. Charles Sims was elected chairman for the year, and Mr. John Humphrey, hon. secretary, and it was further resolved that Mr. Sims, who is a member of the Council of Queen's College, should be elected as representative of the Dental Board on the Council, so that for the future dental interests will be directly and ably represented. In the new calendar shortly to be issued by Queen's College, a special feature will be made of the dental department, which the Council are desirous of opening in a flourishing state; and Professor Windle, the hon. secretary, has been indefatigable in his endeavours on its behalf. Dental students will therefore have every possible advantage in locally qualifying for the dental degree, as the Dental Hospital offers every facility for training, under the hands of a large staff of skilled officers.

We hope our readers will give their best attention to a speech at the Western Counties Branch, and a letter in the correspondence columns, both by Mr. W. H. Waite of Liverpool, in which he calls the attention of the profession to the unsatisfactory condition of the register. The facts have been worked out with the author's usual thoroughness and patience, and will, we hope, bear fruit in the form of a speedy improvement.

THIS being the time of many annual meetings, the publishing committee wish to remind the authors of papers, &c., that it is impossible to produce them all at once, and therefore that they are retained, to insert from time to time as original communications. The delay does not imply any want of consideration for the authors, but is the unavoidable result of circumstances.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

MR. EDITOR,—Will you please give notice that as I am unable to continue the work of the secretaryship of the Dental and Oral Section of the International Medical Congress, Dr. A. M. Dudley, of Salem, Mass., has kindly consented to act.

All communications should henceforward be addressed to him.

Respectfully yours,

E. A. BOGUE (per H.).

The Dentists' Register.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—I am glad to observe that the secretary has called attention to the unsatisfactory condition of the "Dentists' Register," and invited the co-operation of members in an attempt to rectify it. I wish the secretary had taken us more fully into his confidence, because I feel sure that if members were made aware of the facts, they would only be anxious to do their part. A little analysis has been made for me, from which I gather the following :

1. There are still some *clerical errors* in the Register—errors in spelling of names and addresses, some obvious, which should have disappeared long ago, some obscure, which require personal information to correct them.

2. There are a number of *names absent* from the Register, which ought to be included—licentiates in dental surgery of the English College, per curriculum, who have passed out into practice, in one form or other, but have not entered their names on the Register. These gentlemen are in a false position ; it is simply doing them a great kindness to call their attention to the matter ; they cannot be allowed to set the law at defiance, and the sooner they rectify their frontier, the better for them and for all.

3. There are a large number of *names still retained* on the Register, *which should have been removed* ; partly, persons deceased, partly, persons whose admission is of very doubtful legality.

First.—Dental practitioners, of whose decease local registrars have neglected to send up the necessary certificates. The secretary tells us he has written a letter to the Registrar-General on this point. Well ! I hope it may do some good ; "Blessed are they who expect nothing, for they shall never be disappointed." Our members might render assistance in this direction, by obtaining certificates of deaths, of which they are aware, and sending them to the secretary. In future I would suggest that when a member becomes aware of the death of a dental practitioner, he should write a note to the registrar of deaths in the district, calling his attention to the fact, and reminding him of the necessity of sending a certificate to the registrar of the Medical Council.

Second.—Those who were originally registered "in conjunction with pharmacy." There are nearly 1,800 of these in the "Dentists' Register" this year ! Out of this number, 300 are at least doubtful, since they cannot be found in the "Chemists' and Druggists' Register" for this year. They are of two classes, viz :

(a) Ninety names (more or less), found in the "Chemists' and Druggists' Register" for 1879, but which have dropped out since ; these are presumably dead.

Now, sir, here we meet the proverbial "coach and six." When a chemist-dentist dies, it often happens that he is reported simply as a chemist ; local registrars are not supplied with copies of the "Dentists'

Register," so they have no means of knowing that the deceased chemist was also a registered dentist; how should they? The consequence is, that while a proper certificate is forwarded to the "Chemists' Register," no intimation whatever is sent to the "Dentists' Register." Our only remedy for this is *personal attention*, as suggested above.

(b) About 200 names that do not appear in the "Chemists' and Druggists' Register" for 1879, nor in any issue since. It puzzles my provincial mind to understand what business these names ever had in the "Dentists' Register," seeing they were admitted as "in conjunction with pharmacy!"

Surely this is a legitimate field for an experimental exercise in clause 12 of the "Dentists Act." From these and similar discoveries I guess that there are about 400 names retained in our register, all of which are at least doubtful.

Now, sir, and fellow-members, let me remind you the Register is the charter of our liberties! It is the pivot on which every provision of the "Dentists Act" revolves! Without the Register, we have no professional existence! It is our sacred duty to guard the Register as we would guard our honour. Remember, that while a name remains on the Register, anyone can practise under that name; any unregistered individual can set the law at defiance through our neglect. There are such cases. With a personal, conscientious, vigorous effort all round, we can make the next issue far more accurate and creditable than any that have preceded. Will you do it?

I am, dear sir, yours very truly,

W. H. WAITE.

The Address at Chester.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—I am most anxious to perform the pleasant duty of informing my fellow-members of the British Dental Association, that you, the bearer of an honoured name, did not write the scurrilous article on my address at Chester, which appeared in the June number of our Journal.

Feeling indignant at such impertinence, I was desirous of knowing who the persons were who accepted the responsibility of admitting such an article into its columns, and I have now before me the names of the Publishing Committee, without whose sanction members of the British Dental Association cannot obtain access within the sacred precincts of their own Journal.

That Committee consists of twelve men; ten are surgeons, nine with the L.D.S. degree, and one minus that degree; one D.D.S. and one L.D.S.—the latter the bearer of a name that has shed a lustre on our profession for generations without taking the general surgeon's degree. This illustrious Committee of twelve is a model jury, in which the minority decides the verdict—a jury whose self-imposed duty is to "sit upon" those members of the British Dental Association who have

the courage of their convictions, and dare to express them. This is supposed to be a representative body acting for about 600 members, about fifty only of whom hold the surgeon's degree in addition to the dental. Nearly half of our members have no college degree, yet in many instances compare favourably with those who possess the dental and dento-surgical degrees, but these are not represented upon that important Committee, to which is entrusted the principal department of the dental press of the United Kingdom. Need we wonder at a conviction I heard stated a few weeks ago, that "the time is not far distant when the provincial branches will have a journal or journals of their own, managed by an equal number of those who hold the L.D.S. degree, and of those who have not cared to take the dental degree, but, nevertheless, are reputable practitioners and esteemed members of the British Dental Association."

In the July number of the Journal you say, "Mr. Bullin's position as President of one of our great branches entitles him to respectful treatment at the hands of all, but especially at the hands of the Association Journal." It is much to be regretted that it took your Surgeons' Committee a whole month to ascertain that fact; and were it not from feelings of duty towards that great branch, which has been described as "the back-bone of the British Dental Association," I would treat all that has appeared in our Journal with the contempt it deserves, for few men have personally less need to care for the future of our profession than I have; but I will reply and post a copy to each member of the Association, as a second literary and scientific sensation in the dental world, for the Jubilee year, 1887.

My position is this: I have been attacked by two cynical cowards, one concealing his identity behind the editorial screen, and the other, ashamed to attach his name to his letter, has assumed the *nom de plume* of L.D.S., M.R.C.S. I have friends who hold both those degrees, who have no sympathy with my assailants. One, when he had read half through the article I complain of, with flushed countenance used an expressive adjective I will not record in this letter.

For the information of the members of the Midland Branch of the British Dental Association, I wish to say I do not regret having made a single statement in my address to them. I had an object in making the statements I did make, and it will be my duty to explain to them more fully the causes which led me to make them. I made them on justifiable grounds in the interest of the younger members of our Association, and not to please a small minority, who, by occupying the "boxes and dress circle" of our profession, become eligible for seats upon the Examining Board at Lincoln's Inn, with its coveted position and emoluments.

I am, yours truly,

August 1st, 1887.

FRED. BULLIN.

[Although Mr. Bullin has kindly exempted me from his censure, I cannot dissociate myself from my colleagues in bearing my share of

the responsibility for all that appears in the editorial columns of the Journal.—ARTHUR S. UNDERWOOD.]

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I am not given to writing much, but the recent address of Mr. Bullin, and the correspondence it has given rise to, leads me to express my own views. My first feelings on hearing the address of our honoured president were of exceeding regret that an official position should be used to give vent to "pent-up convictions," which, after all, were only the views of a single man. Presidential utterances, I think, should be used in a two-fold manner: first, and principally, to put forth the more immediate practical or scientific advancements during the year; and secondly, to educate the public. Whatever Mr. Bullin has long thought on this subject he distinctly goes out of his province to make such utterances as president. An official utterance of this sort should surely be representative, and I am confident he is much mistaken in stating that he advances the views of the majority of L.D.S.'s, &c.

However, the statements have gone forth, and they have been so ably answered in your June number, that I might well be content to state how fully I am at one with you, and probably should not even have gone so far as this, had not Mr. Bullin in your July Journal referred to your remarks as an attempt "to sit upon" those who differ. Why, sir, what in the world is the use of an editor without backbone? and surely if a presidential chair may be used to ventilate "pent-up" convictions, an editorial page may be occupied in answering them. I see I am getting into controversy, and for this I have no desire. I only wish to state my conscientious opinion that we, as a profession, owe an immense amount of gratitude to the men who have worked in the van, most of whom, who in addition to the Diploma for Dentists, have by extra toil acquired other qualifications, and thus, while honouring themselves, have added glory to their profession. I hold that the L.D.S. must always continue to be *the* qualification for a dentist in all appointments, but I claim, sir, that a man who also obtains the M.R.C.S., F.R.C.S. or even the M.D., honours himself and advances his profession by so doing.

¶ The medical profession has all the *prestige* of an ancient profession, and by our connection therewith we have undoubtedly been elevated more in the social scale during the last ten years than alone we could have advanced in fifty years; our advancement must for a time continue on a cumulative scale, because our social position being determined on a par with medical men, our recruits will be drawn from the same rank of life, and an educated practitioner will be the result.

In conclusion, permit me to add that my only reason for writing is lest silence being observed by country practitioners, it should become interpreted that Mr. Bullin, who is so much (and justly) esteemed, should be taken to be the mouthpiece of our feelings.

I remain, dear sir, yours truly,

Hull, August 5th, 1887.

J. C. STOREY.

Local Dental Appointments.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—In compliance with your solicitation for opinions on dental appointments in connection with local hospitals and infirmaries, I offer you mine, humble though it be.

In the first place I may say that I consider such appointments, provided they are properly worked, a great boon to the poor, but where the only operations performed are extractions, then I am doubtful whether either the *institution*, the PROFESSION, or the *poor* are benefited. I have been the direct means of creating such appointments at two large provincial infirmaries, viz., Bradford and Halifax; the former is represented by one dentist who reports every week so many dental cases and so many extractions; what the dental cases are I do not know, but I presume they are fillings. The latter institution appoints two dentists, but as I have not seen a report of their operations I am unable to say to what extent the suffering poor are benefited.

I have often noticed when those who hold these appointments are tackled on the question of fillings they generally excuse themselves on the plea of cost; this, I think, is a very poor excuse, for in the discussion you refer to, at Bury St. Edmunds, it was shown that from 30 to 40 teeth *have been filled* at a cost of about 3s. 6d. Another excuse is want of time. Well, if the gentleman who holds the appointment did not know before he obtained it that he would not have time to attend, he ought—in fact I think it is his duty—to resign as soon as he becomes aware of that fact.

In your editorial of the July issue you mention the case of a chemist who increased his income to the extent of £200 a year by extracting 4,000 teeth; what will you think, sir, when I tell you that we have a man in Bradford at the present time (not thirty years ago) who has boasted of his making £1 a day by extracting 40 teeth at sixpence each, or over three times the number of your champion. In the face of this I think we require something more than an occasional visit to the infirmary to put a stop to such practice, and with this end in view several dentists in Bradford have opened a Free Dental Hospital which I hope in a very short time will rank as one of the greatest boons of this town.

I do not think I need apologise for occupying so much of your space, as I am certain the importance of the subject warrants it.

Yours truly, A. HOWARTH.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their subscriptions were due in JANUARY last and are requested either to remit them direct to the Treasurer, at 40, Leicester Square, or if more convenient, to pay them through their bankers, or through the agency of one of the Dental Depots, and so save unnecessary postage, &c., in applying for the same.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. 9.

SEPTEMBER 15, 1887.

VOL. VIII.

The Annual Meeting of 1887.

THE Annual Meetings of our Association are always matters of considerable anxiety, both to our executive and to the reception committee of the locality in which they are held. That they have hitherto been highly successful testifies to the excellent spirit which animates our members and to the harmony which exists between the officers of the various branches and the Representative Board of the Association, as also to the wisdom of the arrangement which necessitates a continual change of the locality in which the meetings are held.

The recent meeting in Glasgow, opened under the presidency of Sir Edwin Saunders, and continued under the direction of our new President, Mr. Brownlie, adds yet

another success to the list which it has been our happy privilege to chronicle. Those of our members who anticipated a small gathering owing to the counter attraction of the International Medical Congress, now sitting in Washington, were agreeably disappointed in finding so many members present, and the acknowledgments of the Association are due to those gentlemen who delayed their departure to America to the last moment, in order to be with us at our own meeting. We trust that the public spirit shown by those members may not entail upon them any serious loss or inconvenience, and that the consciousness of having first discharged home duties will add to the zest with which they will enjoy the hearty welcome awaiting them on the other side of the ocean. The spacious room so generously placed at our disposal by the Council of the Faculty of Physicians and Surgeons was filled at the appointed hour by a large audience, who showed by the interest which they took in the business part of the meeting that they had the affairs of the Association at heart, and that there was no diminution in the deep concern which has always been shown in our progress, and in the necessarily tedious process of the election of new members to the Representative Board, and in the general ordering of the business for the coming year. The rival merits of Birmingham and Dublin to receive the Association next year were keenly debated, and although priority of claim was accorded to the former, the feeling that the ninety and nine should welcome the missing one prevailed and Dublin was chosen. The appropriate character of this sentiment was confirmed by a generous communication received on the following day from the president of the Central Counties Branch, approving of the decision and promising the cordial support of its members to the Dublin scheme.

As will be seen when our transactions are published, the

papers were of an interesting character; they were well received, and had time permitted the discussions could have been prolonged to any reasonable extent.

The exhibition of dental instruments made by our leading depots was varied and instructive. The demonstrations were chiefly interesting from a mechanical point of view. The ingenious arrangement adopted by Mr. Brunton, of Leeds, for working gutta percha in stopping operations, also his improved matrix and clamp—a great improvement on his previous one—and the mechanical tell-tale of Mr. Coxon of Wisbeach, by which a bell is sounded and the gas shut off from a vulcanizer at whatever time is set on the index plate, were all much admired by the visitors to the Dental Hospital in George Square. But the interest of the members culminated in the water motor shown by Mr. Campbell, of Dundee, one similar to which is now in successful use in the surgery of Mr. Brownlie, and in the electric mallet of Mr. Kirby, of Bedford. The use of this ingenious instrument was demonstrated by Mr. Lloyd Williams. The merits of the mallet are, that there is no back weight, it being about the same in appearance as an ordinary automatic hand mallet; the intensity of the current is regulated by a small button and slot on one side of the cylinder, and contact only takes place when the end of the plugger is pressed on the metal which is being worked.

At the dinner on Friday evening our President was supported by Sir Edwin Saunders on one side and Sir James King, the Lord Provost of Glasgow, on the other, while several gentlemen of distinction occupied the cross table, among whom was the President of the Faculty of Physicians and Surgeons. The proceedings were rendered remarkable by the readiness with which Mr. Hutchinson—who was acting as honorary secretary to the Benevolent Fund in the absence of Mr. George Parkinson—seized

the opportunity of utilizing an offer made by Dr. Stæck of Dublin, that if the £820 invested by the Benevolent Fund Committee could be made up to £1,000 by Christmas time he would contribute £10. So well did Mr. Hutchinson plead the cause with which he was instructed, that the amount, with something over, was made up by the gentlemen present, the Lord Provost generously showing his interest in a very practical manner by adding his name to the list of contributors. On Saturday morning we went to the shipbuilding yard of Messrs. Denny & Co., and a pleasant sail up Loch Long brought to a termination the latest success of the British Dental Association. The visit to the great works of Messrs. Denny at Dumbarton was a novel feature in the third day's proceedings. The various uses to which electricity is applied was a revelation to many of the visitors, and the extensive canal or basin constructed for the purpose of studying the wave line in its application to ship building was a very striking example of the successful character of the proprietors of this colossal establishment; while the handsome champagne luncheon provided for the visitors, showed that science and liberal hospitality need not be divorced.

To those who have attended all our annual meetings, the absence of some well-known faces must have suggested thoughts of a kind, not altogether of a jubilant order, and the changes made in our chief officers mark, as it were, an epoch in the history of the Association. Happily the names of both Sir John Tomes and Sir E. Saunders still appear on the list of our Representative Board, and that of James Parkinson is still represented amongst us by his two sons. For Mr. Spence Bate we must cherish the hope that next year we may be more fortunate in his presence.

It may seem out of the province [of a leading article to

go into such details, but as our great object is to advocate the cause of our Association, and to justify its existence, we think that such a statement is more eloquent than anything we can say on its behalf. Never has the annual meeting fulfilled its mission better than it has done this year. By it our profession, as such, has been brought before the public more prominently than ever it has been before, and not only have we been well reported by the local press, but all the leading Scotch and English papers, including the metropolitan dailies, have reported our proceedings at considerable length. Surely all this is worth something to us, as a body of professional men born, as it were, but yesterday.

The Irish Branch.

SINCE our last issue we have many important events to record, and we feel entitled to indulge in a somewhat triumphant tone in this September number for more reasons than one. We may safely predict, however, that no announcement will give more widespread satisfaction among the well-wishers of the Association than that which records the formation of an Irish branch in Dublin. The Irish branch is something more than a new branch. Its inauguration means more to us than the addition of so many new members to our rapidly-increasing list. It means the extension of our principles and influence throughout a new country; it means that the profession in every part of the United Kingdom have now thrown in their lot with us, and that there is now no part of Great Britain where the best elements of the profession are not combined and organised to further the objects of the British Dental Association.

The gratification which we feel at the fact of the inauguration of this new branch is intensified when we

reflect upon the manner in which it was done. The more than cordial reception by our Dublin *confrères* of the representatives of the parent Association who took part in their inaugural meeting, came like a welcome note of confidence in the central executive body in London at a time when such an expression of feeling was especially gratifying. Nothing could exceed the kindness and hospitality of those who organized the meeting, and the harmonious and business-like manner in which the branch was inaugurated augurs well for the future conduct of its affairs, and suggests the prospect of a very successful and enjoyable annual meeting next year.

The executive of the new branch have been selected with judgment, and they are all men who will add to the dignity of the Association, and will help to elevate the general tone of the profession.

The Association has been a great gainer by the establishment of this branch, but there has been a greater gainer still, and that is the dental profession in Ireland. The men who the other day were professionally and socially more or less isolated, will find a wonderful change come over their public and private relations; names that have hitherto been only names to them, will be transformed into pleasant acquaintances and valued friends. The word association implies companionship and fellowship, it has a very warming influence, and apparently insuperable barriers that used to separate men from each other melt and disappear as if by magic when a common object and mutual work throw a new light upon the business of life. Legitimate association is the great destroyer of selfishness and narrow-mindedness, and not infrequently leads us a step or two nearer towards the wholesome discipline of seeing ourselves as others see us.

Looked at from every point of view, the formation of

an Irish branch is a great event in our history, and in the history of the profession in Ireland, and we confidently anticipate a rapid increase in the numbers of the new branch. We trust there will be but few who will so forget the duty they owe to their fellow professional men and to themselves as to remain aloof from so beneficial a movement. The Association is formed to protect the interests and to raise the *status* of the profession, and all who value either should give it their ungrudging support. It is not given to all to be active members, to read papers, make speeches, or do secretarial work—to many such things do not come naturally and are uncongenial; but it is within the power of all to aid and abet a good movement by their subscription, and the support of their name and influence. Moreover, upon purely selfish grounds it is the wiser, as well as the more patriotic, course to associate oneself with an active and growing organisation of all the best elements in one's calling. The Association is advancing in power and influence, and the time is slowly but surely approaching when it will include within its ranks almost all who practise our profession in a true professional spirit, and exercise a direct influence on public opinion. The establishment of an Irish branch is a long stride in this direction, and will no doubt be regarded by those who still hesitate to join us as a proof of the increasing popularity of the Association, and may act as a stimulus to many to join our ranks. The Association has been accepted on its merits by the best men in England, Scotland and Ireland, and it is difficult to see why a dentist who could enjoy the privilege of membership should voluntarily separate himself from his fellows.

ASSOCIATION INTELLIGENCE.

Annual Meeting of the Western Counties Branch.

(Continued from page 495.)

THE second paper (which we publish elsewhere, with illustrations) was read by Mr. Charters White, the subject being "Some Points in Dental Histology bearing on the Conservative Treatment of the Pulp."

This was succeeded by a paper by Dr. Maughan on "Referred Neuralgias."

THE HON. SECRETARY, in the absence of the writer, then read a communication from Mr. C. Spence Bate, F.R.S., L.D.S.Eng., of Plymouth. The writer believed the introduction into dental surgery of what was termed bridgework to be mechanically unsound, and when it necessitated the excision of a healthy tooth, or the perforation of useful ones, to be surgically wrong. He then proceeded to explain a plan of denture which he had been in the habit of supplying, when he felt it desirable to obviate the necessity of large palates. There were few conditions of the mouth where skeleton work was not practicable. He had forwarded models, and regretted that he should not be able to be present to give details, but added that he would be pleased to reply to questions.

A paper on "Epulis," by Mr. C. A. Hayman (which we publish elsewhere) was then read, followed by communications by Mr. McAdam and the President.

This brought the business of the meeting to a close, when by the invitation of the President the members proceeded to Field Place to partake of a champagne luncheon.

In the afternoon the members visited the rooms of the President in Rowcroft, to witness and take part in a series of demonstrations, as follows:—Mr. T. Cooke-Parson "Tooth-pivoting"; Mr. J. T. Browne-Mason "Hard Gold Filling"; and Mr. F. H. Balkwill "The Use of Smooth Pluggers in Packing Open Cavities."

The Annual Dinner of the Branch was held at the Imperial Hotel at half-past seven, when a considerable number of guests responded to the invitation of the President to meet members. Mr. E. Apperly presided, and was supported by Mr. A. B. Winterbotham, M.P., Mr. J. T. Stanton, J.P., Mr. W. J. Stanton, J.P.,

Mr. A. Apperly (brother of the President), Major Fisher, Mr. A. J. Morton Ball, Mr. C. Curtis, Rev. E. H. Hawkins, Rev. P. G. Grenville, Dr. Howsin, Mr. C. Wethered, Mr. A. S. Cooke and Mr. C. E. Liesching. The total number present were about forty-five, including several members who had been unable to reach Stroud in time for the general meeting.

The usual loyal toasts were given by the Chairman, after which Mr. Charters White proposed "The Army, Navy and Reserve Forces," Major Fisher replying for the Regulars, and Major Rogers for the Volunteers. The Clergy and Ministers having also been given and responded to,

Mr. SMITH TURNER proposed "The Imperial Parliament," associating with the toast the name of Mr. Winterbotham, who, the speaker said, had travelled four hundred miles in order to be present, and had left a place in beautiful weather where he was engaged in forwarding a cause which he had deeply at heart.

Mr. WINTERBOTHAM, M.P., who on rising was received with applause, said he was very much obliged to Mr. Smith Turner for the flattering way in which he proposed the toast, and to the company for the kind reception accorded. Men had been known to struggle all their lives to get to Parliament, and when they got there, there was a great deal of disappointment, of dreary talk, and failure in doing any real solid work that they had set their heart on doing; and the one thing that was cheering and consoling was the kind and generous way in which the English public always treated any man, on whatever side of politics, who tried conscientiously to do his duty.

Mr. WETHERED said that the privilege of proposing the toast of the evening—the British Dental Association—had been assigned to him. He might well congratulate gentlemen of the Association present upon the decided success of their meeting this year at Stroud, although the programme was not as yet completed. He had not had the advantage of hearing the presidential address or the papers that followed, but he had been told, what he could well believe, that each was excellent in its way. As he had been a partaker of it, he knew how much they had been gratified by the hospitality of Field House, and he hoped they would hereafter retain pleasant memories of their brief visit to this town close to the Cotswold Range, famous for its scenery, and for the production of those finely woven fabrics known to all the world as West of England cloth. Some of his fellow townsmen and himself,

through the kind invitation of their worthy President, had the pleasure of meeting them that evening at a table laden with those good things of this life which would have satisfied the natural cravings of Friar Tuck himself. Such a gathering as theirs helped to promote mutual good-will, and to maintain that *esprit de corps* which should animate all professional workers in the same field of activity. The best part of each of their lives was that which was most helpful to others, and among the affinities which linked the dental and medical professions together, there was one above all others which he might especially mention—that the members of both were constantly engaged in the relief or removal of some of the many ills which fell to the lot of their common humanity. While doctors, it might be said, took a wider range in treating derangements of the human system, dental surgeons concentrated their knowledge and skill on that special set of organs which in the economy of nature were the last to develop and generally the first to decay. All of them, or at least all of those whose hair had lessened or turned grey, knew how much of their personal comfort and sometimes even their health depended on a sound state of their organs of mastication, and he need not say how much they were indebted to gentlemen of the profession so well represented in that room for their ever-ready help in their hours of dental trouble.

For there was never yet philosopher
That could endure the tooth-ache patiently ;
However they have writ the style of gods,
And made a pish at chance and sufferance.

So said their supreme artist in "Much Ado about Nothing," and until within their own memory the wrench of the extracting process was as much or even more dreaded than the wearisome pain itself; but now with proper precautions the patient could pass through this in a state of suspended sensation and perception. He knew in days long gone by that amiable and accomplished dental surgeon, the late Mr. Robinson, of Gower Street, whose name would be handed down to posterity as the very first man in England who administered an anæsthetic by the inhalation of ether. A few days after his initial operation Mr. Robinson was present when he (Mr. Wethered) saw the great surgeon Liston remove a bullet from the very centre of the thigh bone of the gallant Hungarian Officer, General Bem. Looking back through the long lapse of forty years he seemed to see as if it were almost

but yesterday the leaden ball between the blades of the forceps, as it was held up before the wondering gaze of 200 medical students who had just seen it extracted through a flesh incision five inches long, without the smallest indication of suffering. That was, he believed, the first of those hospital cases, now of daily occurrence, where science and peace have their "victories no less renowned than war." The means now at their disposal for the prevention of pain in dental and operative surgery generally—that branch of medicine comprised in the term anæsthetics—was beyond all question the most beneficent discovery of the nineteenth century.

Mr. SMITH TURNER expressed his regret at the absence of Mr. Spence Bate, who was also down to respond. The toast of the "British Dental Association" was always an important one in such an important hand. He thought the proposer had hit upon two chords which must have awakened something like a response in all their minds. The first was when he referred to the necessity for unity amongst gentlemen following any particular profession. Especially was this unity necessary for them, because, although they were beginning to be appreciated for what they could do, they were a young profession. It seemed but yesterday that they were scattered about the country with no privileges, only a name, and no defined position socially, professionally, or educationally. It was only lately that all this had been changed. The change had come about so suddenly that he did not think half of them yet realised the difference between the past and the present. They had become by legislation a profession, similar in all respects to the profession which it was their aim to imitate, both in their honourable dealings with their patients, in their professional conduct, socially, and in their intellectual attainments. In the end they had established a curriculum very similar to that of the medical profession. It was yet the fashion, and would be for some time to come, to look upon dentists and dentistry as a very secondary profession. But if it be that they were a part of the medical profession—and that was the second chord that was touched upon by the gentleman who proposed the toast—if it be that they were recognised as part of that great profession, it was on the other hand true that they were doing their best to qualify themselves for the position, and did not attempt to occupy it under any false pretence. He was not speaking now to those gentlemen who were brother professionals.

of his own—he rather wearied them by mentioning these things—but for the sake of gentlemen who had been kind enough to come there and join their social board at the invitation of the President, and who perhaps were not quite aware of the position which dentists occupied, and were seeking to occupy, with credit to themselves, and advantage to the public. He must tell them that their education was not second to that of the medical profession in its requirements. He thought there was room for improvement in the way in which the curriculum was carried out, but this would come in time, as was the case with the medical curriculum. It was within the memory of everyone present when the medical curriculum was carried out in a most slovenly way, so much so that a London coach boasted that he could get a cabman through the College of Surgeons in six months, and he believed that as things were then it was not far from true. But things had very much improved, and medical students were no longer mere sawbones, but hard-working, knowledge-seeking, industrious young men who had a spur, and who, if they did not respond to that spur, would never become members of the profession. In the same way, a change would come in the carrying out of the dental curriculum. Both began on the same level. The examination in arts was the same for both. Before the dental pupil could register as a student, he had a course of instruction to go through similar to that of the medical student. The studies, however, only went together up to a certain point, which the proposer had dimly alluded to when he said that the dental profession gave their attention to a certain part of the human frame which was late in coming, and early in going. This attention demanded an education peculiar to itself, which was not to be found in any purely medical curriculum or medical school, however well arranged. Consequently, to prevent the dental student being overtaxed, or required to bring to the service of the public more than he would ever be remunerated for, his studies diverged, and instead of having to follow out every detail of medicine and surgery to the extent which a medical practitioner had to do, he was drafted away to the Dental Hospital, where he had to specially take up dental surgery and physiology, in addition to dental manipulation. He also had to serve an apprenticeship from which medical students were exempt; but this was a necessity imposed because of the large part of a dentist's time which was taken up with mechanical manipulation. He believed the dental profession was

rightly assuming a true position as a branch of the medical profession second in no respect to the medical profession itself. We all had to bring something to society in the way of talent, or of wealth, or of education, and if a dentist had to make the same preparation for serving his fellow creatures as a medical man had to make, it simply depended upon the dentist himself as to the position he occupied, either socially or professionally. He therefore thought, with all due respect and modesty, that if they had patience and worked steadily on in the course which they were now pursuing, the medical profession would not look upon them as a subordinate part of their profession, but see that they were educated in like manner as themselves. He also believed that the public would gradually learn to respect them for what they did in preparing themselves to serve them. The object of the Association was to bind dentists together to carry out these principles. Legislation had done as much as it could, or ever would; and it was for them to take advantage of what it had done. It was folly to hark back and talk of what might have been, and what ought to have been. What had been done had been done with the best intentions, and would, he believed, ultimately prove the best thing that could have been done. He hoped the Association would always be supported by such strong branches as the Western. They could not expect the Association to continue to increase as at first, but it was increasing, and he believed that when they met in Glasgow their Secretary would have a good record to place before them in point of numbers. In the name of the Association he thanked them for listening to him, and for the kind way in which the toast had been received.

Mr. J. T. STANTON then proposed "The Medical Profession." He said it was a toast which required no encomiums from him. The medical profession was a noble profession, and consisted of a body of men who devoted their whole attention and energy to alleviating the miseries of mankind, and sometimes under circumstances of great difficulty, and with very little thanks. Their night and days were spent largely, especially in country districts, in going about from house to house to succour those who were in distress, and they knew how very confidently people looked for the doctor when they wanted him, and how very glad they were to part with him when they had done with him. No praise would be too good to bestow upon the doctor, and he was sure they would all

join heartily in drinking the toast, coupled with the names of Mr. Cooke and Dr. Howsin.

Mr. COOKE responded in a few brief and appropriate words.

Dr. HOWSIN remarked that Mr. Wethered had alluded to the sumptuous meal, and if there was one thing calculated to spoil a dinner, it was to find one's name down on the toast list for a speech. He always felt on such occasions that he should like to be like those bottles used for gas, when you turned the tap and it came out as wanted. He was attending a case recently of gas, not in Stroud, where the wrong cylinder was used. The consequence was there was no gas, and he felt that all the gas was out of him. If there was one thing upon which they could congratulate themselves upon, it was the improved relationship subsisting between the two professions. It was in the memory of most of them when medical men looked rather askance at the dental profession, and regarded it rather as an interloper; but all this was past. It was within his memory when dental surgeons were not appointed to hospitals. At hospitals the manipulation was acquired in rather primitive fashion. There were two pairs of forceps: one for molars and one for incisors, and if one did not do, they took the other. These were facts, he assured them, and if the other did not do, the poor patient went away unrelieved. The two professions were really one, and medical men looked upon dentists as brother practitioners. He sincerely hoped it would always be so.

Mr. BROWNE-MASON proposed "The Odontological Society." He said it needed no words from him to commend it to his brother dental surgeons in the room, when they recalled the fact that to the veterans of the society they owed their affiliation with general surgery pure and simple. The old members of the Odontological Society—the veterans so to speak—were beginning to drop away, but they had left their stamp upon the society, which was, what it had always aimed to be, the scientific branch of their Association. He alluded to Mr. Charters White's microscopic investigations in connection with their special work, and said of such men they might be justly proud.

Mr. CHARTERS WHITE said as its late president he felt very proud of the Odontological Society, and of the progress it had made. It was the scientific body of the profession, the association itself being more political in its objects. He spoke of the great attainments of many of the members of the Odontological

Society, who were constantly working in some branch or other of dental surgery. They might date all their advance from the advent and genesis of their association. They had members who never flagged in working out problems which would eventuate in good to the public—men of various tastes and sympathies. He thanked them for the manner in which the toast had been received.

Mr. MCADAM in proposing prosperity to the town of Stroud referred both to its natural beauties and to its manufactures. He had, he said, the pleasure of visiting the place two years ago, and going over one of the cloth mills, where he was struck with the elaborate description of machinery. One might almost say that a sheep was put in at one end, and came out a dress suit at the other. He thought it would be a good thing if they could put dress suits in at one end and turn out Cotswold sheep at the other. He was much pleased to see the town prospering, and wished it good luck. He coupled with the toast the names of Mr. W. Stanton and Mr. A. Apperly.

Mr. W. J. STANTON expressed his pleasure at being present and supporting the President. Many comparisons had been made between the medical and dental professions, and allusion made to the improvements in both. Skilful adaptation and delicate manipulations were among the great advances of the age, and as applied to dentistry they reflected great credit on the profession. On the morrow, thanks to their worthy President and some of his friends, they would see some of the intricacies of modern cloth machinery. He heartily wished prosperity to the town with which he had been, and hoped long, to be connected.

Mr. APPERLY expressed his pleasure at meeting so large a number of gentlemen connected with the dental profession. Referring to past times he gave an amusing account of a chemist's attempt to extract a tooth for him thirty years ago. Alluding to commerce he said he hoped England would ever keep to the front, and never allow foreigners to overstep us. Ever since the great exhibition of 1857, when we showed them all our advantages, they had gradually progressed, and in many cases out-stepped us. But he believed that British pluck and energy would not be beaten; and he thought he might safely say that Stroud would hold its own against the world. He believed Stroud had advantages which few neighbourhoods possessed; and a better feeling existed between employer and employed there than in almost

any district he knew. They never had strikes, and very seldom disagreements. He had never had a turn out since he had been engaged in commerce, and he believed Mr. Stanton could say the same. They felt highly honoured at the Association coming amongst them, and he felt a special honour in his brother being elected President for the ensuing year.

Mr. ROGERS (in the absence of Mr. Winterbotham, who left early) proposed "The President." He was quite sure he was echoing their sentiments when he expressed their obligations to the President for the way he had received them, and also for the manner in which he had carried out the arrangements for the demonstration. They had received a reception such as a town of the Western Counties could show when called upon. He had known the President for twenty-nine years, and had never heard him spoken of but in the highest possible terms; while he had carried on his professional duties with honour to himself, and credit to the town, and to the profession to which he belonged.

The toast was drunk with musical honours.

The PRESIDENT thanked Mr. Rogers for the kind way in which he had spoken of him, and the company for the hearty reception of the toast. He assured them that he should at all times be happy to do anything in his power to further the prosperity of the profession; and he trusted that during his year of office he should worthily discharge the duties of President. He thanked them very much for electing him, and for coming to Stroud. It had been a great pleasure to him and his wife to receive them that day. He should at all times be ready to place his services at the disposal of the Branch, and he again thanked them for their reception.

Mr. H. B. MASON proposed "The Guests."

Mr. CURTIS responded. As a visitor he thanked them for the pleasant evening. They had not only had a most splendid repast, but also food for the mind. He had heard of the wonderful charms of cocaine till he almost longed to have a tooth out to enjoy the sensation. In fact, it appeared that with cocaine, the operation was like Shakepeare's lover's pinch, "It hurts, yet is desired." He sincerely hoped that the stay of the Association in Stroud would be a happy one.

The British Cathedral Quartette rendered a choice selection of vocal music during the evening.

EXCURSIONS.

By general acclamation of the professional gentlemen attending the Conference, Friday's programme was carried out in a manner that left nothing further to be desired. The business portion was of an eminently satisfactory nature; the educational or professional instructive to the younger members, whilst the social, thanks to the liberal hospitality of the President, Mr. Ebenezer Apperly, and the *aides de corps* he judiciously selected through Mrs. Lawson, added not a little to the success of the meeting. Those who were compelled by business and other engagements to allow their visit to Stroud to terminate on Friday, did so with the greatest reluctance; and had they known the recreative treat in store for those who decided to enter upon the second day's programme, we think they would have made a great effort to join in it. Punctually at 10 a.m., about a score of the professional gentlemen and some friends met at the hospitable "Imperial Hotel," where well-horsed conveyances were ready to enable them to carry out the chief item in the day's plan; viz., a visit to the cloth manufactory of Messrs. Apperly, Curtis & Co., Dudbridge, and a drive thence to the Birdlip heights, overlooking the Cheltenham and Gloucester vale, and the Malvern and Forest ranges.

Curiously enough, the start was made just as a procession of some dozen other brakes was passing on the same road on a work-people's holiday. The divergence of route at Cainscross however soon enabled the "natives" to discriminate between the two parties if they were so dense as not to be able to do so from other reasons. Arriving at Dudbridge, the visitors were welcomed in the mill yard by two members of the firm, Mr. Alfred Apperly and Mr. Chas. Curtis, than whom there could not be found more genial and hospitable hosts, or more entertaining and loquacious guides. Piloted by these two gentlemen the party proceeded over what we must, in justice to them, and without derogation to other local firms, designate as one of the most perfect and modern cloth manufactories of the day. The professional gentlemen took the deepest interest in the various stages of the cloth manufacture, from the unpacking of the unpicked wool to the drying, cutting, measuring, and folding of the cloth itself. Machines that run at a greatly increased speed, Porter and Clark's process for softening and filtering the otherwise hard and filthy water from the brook, a new machine for taking off all the excrescences in the yarn

previous to weaving (of which there are only six in the world), and a revolving rack upon which all shades of yarn are stored, are adjuncts towards enabling this firm to reap advantages over many others. The scrupulous cleanliness and absence of waste, in every department, are especially observable; indeed at every point it is apparent that the firm of Apperly and Curtis are determined to keep pace with the times, both as regards design and excellence of manufacture. It is but just to add that the foremen in their several departments were all very willing to impart information, and appeared to be highly efficient and intelligent men.

The two hours or more spent in this interesting way soon passed over, and brought the visitors to the counting house and store room, where, in addition to the manufactured goods of the firm, was to be found a bounteous luncheon kindly provided by the members of the firm, Messrs. Apperly and Curtis. In this spacious room, and with ample and good resources, the company, after doing justice to the good things provided, Mr. BROWNE-MASON, the retiring President, in a few highly complimentary and well-chosen remarks, proposed the healths of the respective members of the firm, and expressed his own and his friends' appreciation of the kindness and hospitality shown them that day.

Messrs. A. APPERLY and C. CURTIS suitably responded, expressing their pleasure at being honoured with the visit of such a body of gentlemen, and hoping if any of them should at any future time revisit Stroud, to give them an equally warm reception.

The fragrant weed having been served round, the party proceeded by brake, *viâ* Pakenhill and Painswick, to Birdlip, where at Mr. Johnson's a capital meat tea was provided, the table being graced by the presence of Mrs. and the Misses Alfred Apperly, and other friends. The inspiring motto given in Irish, "Ten thousand welcomes," seemed to be fully realised and acted upon; and after a very pleasant meal, and a stroll round the grounds, the final adieu had to be taken, much to the regret of many who had never before been in the neighbourhood of Stroud, and who were literally astounded at the beautiful scenery of which this neighbourhood can boast.

Stroud was reached, *viâ* the Slad, in time for some of the professional gentlemen, who had hundreds of miles to travel, to leave by the seven train, and we think we shall not be wrong in saying that those who attended this scientific annual *reunion* will

long look back upon the Stroud visit as an important event in the history of the Association. For this they will have to thank their talented and hospitable President, Mr. Ebenezer Apperly, and his numerous friends, who assisted him to give a right warm welcome to a body of gentlemen to whom the world are so deeply indebted.

The names of the following gentlemen attending the meeting were accidentally omitted from the list given in our last number: Mr. E. L. Dudley, Bath; Mr. Peyton Levason, Hereford; Mr. J. Lewis Robertson, Cheltenham; Mr. T. C. Colledge, Stroud.

The Inauguration of the Irish Branch.

On the morning of Saturday, the 13th of August, a few of the promoters of the formation of the Irish Branch of the Association met together informally at the house of Dr. Arthur W. W. Baker, where Messrs. Robert Moore, R. T. Stack, W. B. Pearsall, J. S. Turner, W. H. Waite and Arthur S. Underwood were entertained at luncheon by Dr. Baker, before adjourning to the formal meeting at the Royal College of Surgeons of Ireland.

AFTERNOON MEETING.

At 4.30 p.m., a number of gentlemen met at the Royal College of Surgeons of Ireland, in response to a circular which had been sent out by the promoters of the branch, to consider the necessary preliminary steps for its organisation.

There were present Messrs. Theodore Stack, W. B. Pearsall, G. W. Yates, F. McClean, Dan. Corbett, J. O'Duffy, Chas. Wall, Duncan McCallum Smith, R. Moore, Arthur Baker (Dublin), W. C. Corbett (Cork), Taylor (Waterford), Cameron Rogers (Wexford), W. H. Waite (Liverpool), J. S. Turner and Arthur S. Underwood (London).

On the motion of Mr. Dan Corbett, seconded by Mr. W. B. Pearsall, Mr. James Smith Turner was unanimously voted to the chair.

After some preliminary remarks, in which he expressed his great gratification at being called upon to preside at a meeting, the object of which was to inaugurate an Irish branch of the association, the Chairman called upon the Hon. Secretary, *pro*

tem., to read his authority for calling the meeting, and also any other communications with reference to it which he might have received.

Dr. STACK explained that for two or three years it had been his ardent wish that a branch of the British Dental Association should be established in Dublin. Things had, however, been brought to a head by the appearance in the Association Journal of some suggestions upon the subject. Determined to accede to the appeal in the Journal, and essay the formation of a branch, he, and those who were working with him, felt that if this could be accomplished before the Annual General Meeting at Glasgow, there would be a possibility of holding the annual meeting for 1888 in Dublin. The following circular was therefore sent round to all those dental practitioners in Ireland who were eligible for election.

ROYAL COLLEGE OF SURGEONS IN IRELAND,
DUBLIN, *August 1st*, 1887.

DEAR SIR,—In asking your support to the formation of an Irish branch of the British Dental Association, we do so on the ground that the objects of the Association ought to commend themselves to all legitimate Dentists who wish to practise their profession reputably.

Now that there are numerous off-shoots of the parent Association in England, and two such branches in Scotland, it is surely time that Ireland should have some organisation to enforce compliance with the Dentists Act, 1878.

The rule of admission to the British Dental Association runs as follows :—

“Candidate shall be eligible for election as a member of the Association provided that he be of good character, that he does not conduct his practice by means of the exhibition of specimens, appliances, or apparatus, in an open shop, or in a window, or in a show case, exposed to public inspection, or by means of public advertisements, or patented or secret processes, or by the publication of his scale of professional charges.”

The chief objects of the Association are—

1st. To keep the Dentists' Register correct, to prevent impersonation, and generally to guard the interests of all Dentists proper, by enforcing the clauses of the Dentists Act (1878) which protect the privileges of Dentists.

2nd. To encourage all practitioners to pursue their calling reputably, and to call the attention of the different licensing bodies to breaches of professional etiquette on the part of their licentiates.

3rd. To afford a centre to which all reputable practitioners can rally, and to which no disreputable practitioner can belong, and to

hold periodical meetings of members of the Association in different parts of the country.

We may remind you that in the medical profession there is a close parallel to this proposed Dental organisation. It may confidently be hoped that before long all medical men, and through them a large section of the public, will readily understand and appreciate the difference between the reputable Dentist who is within, and the advertiser who is without, the pale of the British Dental Association.

Owing to the near approach of the Annual General Meeting in Glasgow, to be held on August 18th, 19th and 20th, we trust that you may be able to send us a favourable reply, if possible by return of post, so that we may be able to report satisfactory progress to the meeting of the Representative Board to be held in London on August 4th.

To this circular he had received twenty-seven favourable replies. He had also received letters from Messrs. Gillies, of Derry ; M'Stay, and Andrews, of Belfast ; A. F. Thompson and J. S. Thompson, of Dublin ; Hare, of Limerick, and Ollivere and Lewis Egan, of Cork, expressing their sympathy with the movement, and regretting their inability to attend the meeting. Mr. Stack concluded by reading the list of members proposed for election.

The CHAIRMAN then explained to the meeting that the bye-laws, a copy of which had been handed to each gentleman present, must be sent to the Representative Board for confirmation. This proceeding, although in most cases amounting to a formality only, was nevertheless absolutely necessary to procure a unanimity throughout all the branches of the Association as regards its laws. The Association had not yet gained all it wanted, there were many things to ask of the authorities yet, and the only way to make our voice heard and our wishes attended to, was to first procure perfect agreement among ourselves. The bye-laws before them had been modelled on those of the Midland branch, a very successful and influential branch, a representative of which, Mr. Waite, of Liverpool, was present that day, and he (the Chairman) thought they could scarcely be improved upon. There were two courses open to them, to criticise each law in detail, or to adopt them *en masse*.

Mr. DANIEL CORBETT proposed, and Mr. TAYLOR seconded, that the bye-laws should be adopted *en masse*, and this was carried unanimously.

The CHAIRMAN apologised to the meeting for the non-acceptance by the business committee of certain irregularly

filled up forms of application for membership : a certain delay had arisen thereby in the election of those gentlemen, but the laws of the Association were strict, and the fact of the incorporation of the Association rendered it impossible to relax its rules.

It was proposed by Mr. O'DUFFY, and seconded by Mr. ARTHUR BAKER, and carried unanimously, that the bye-laws, as adopted, be referred to the Representative Board for confirmation.

The CHAIRMAN then read the list of officers, which had been suggested by the promoters of the movement, as follows:—*President*, Daniel Corbett; *Vice President*, Robert H. Moore; *Hon. Treasurer*, Robert Hazleton; *Council*, A. W. W. Baker, Daniel Corbett, jun., W. C. Corbett, W. H. Elwood, John M'Stay, John O'Duffy, Frederick Ryding, A. F. Thomson, Charles Wall; *Hon. Secretary*, W. Booth Pearsall.

He remarked that if those gentlemen on the list whom he had not the pleasure of knowing were as fitted for the post as those whom he did know, the Irish branch could scarcely desire a stronger executive.

Mr. CAMERON ROGERS (Wexford) in proposing the election *en masse* of those names that had been suggested, expressed his strong sense, speaking as a country practitioner, of the desirability of the executive consisting principally of Dublin men, Dublin being necessarily the centre of operations.

Dr. STACK, in seconding the proposal, explained that the list had been drawn up in the only way possible, that a ballot was not possible. He thanked Mr. Rogers for the kindly expression of confidence in the Dublin men.

The proposal was carried unanimously.

Mr. J. Smith Turner then vacated the chair to make room for the newly-elected president of the Irish branch, Mr. Daniel Corbett, who was received very enthusiastically.

The PRESIDENT commenced his duties by proposing a vote of thanks to Mr. Smith Turner, for coming over to help them inaugurate their branch; he alluded in graceful terms to the high position Mr. Turner occupied in the councils of the Association, for which he had done so much.

Mr. WAITE, in seconding the vote of thanks, drew the attention of those present to the readiness always evinced by Mr. Turner, to sacrifice his time, his money, and his health, in the service of the Association, and pointed out that this hurried rush to Dublin and back was a case in point, coming as it did only a few days before the Annual General Meeting in Glasgow.

Mr. TURNER, in replying, alluded to the pleasant influence of professional association in smoothing down little angularities, and showing us unsuspected good points in the characters of men as we learnt to know them.

The PRESIDENT said that a few words were necessary from him in explanation of his presence in the chair. When he had been asked to occupy that proud position his natural timidity had been overcome by the pleasure he felt in being able to assist his profession. He had but one claim, and that was priority of age. Fifty years ago he had come to Dublin, a youth with only the beacon light of his father's character to guide him and his own determination to succeed. There were about half-a-dozen dentists then in Dublin; he called on one who used an expression which had never faded from his memory: "Well," he had said, "there are a great many coming into the trade." It had been his ambition ever since that this noble calling should cease to be a trade and become a profession. The public had helped him to a considerable measure of success; how could he best repay the public? He thought by assisting his professional brethren in the good work of weeding out from their ranks the unworthy charlatan and advertiser.

Dr. STACK next proposed "That this meeting gives a most cordial invitation to the British Dental Association to hold the next annual meeting in Dublin, and that Messrs. Hazleton and W. Booth Pearsall be requested to convey this invitation to the Representative Board and the next meeting in Glasgow," and, in doing so, alluded to the great success of the meeting of the British Medical Association, which had taken place in Dublin a few days before, and ventured to promise that he and his colleagues would not be behindhand in the welcome they would give to the parent Association.

Mr. CAMERON ROGERS seconded the motion, which was carried unanimously.

Mr. PEARSALL expressed his strong sense of the responsibilities of his position, and his firm determination to be a good and diligent servant. Dental surgery must hold as great a reputation as the sister professions of medicine and surgery.

The PRESIDENT proposed a vote of thanks to Mr. Waite, seconded by Mr. CAMERON ROGERS, and carried unanimously, and after Mr. WAITE had thanked the meeting,

Mr. TURNER proposed that a cordial vote of thanks be accorded

to their energetic Secretary, *pro tem.*, Dr. Stack, for the infinite trouble he had taken in the arrangement of the meeting. Their great success had been largely due to his exertions, and the thanks of the branch and of the Association generally were due to him.

Mr. BOOTH PEARSALL seconded the vote, speaking in very cordial terms of the zeal, energy, and tact of his colleague and friend, Dr. Stack.

Dr. STACK, in a few brief words of reply, expressed his confident hope that the day of their inauguration would be remembered as a day upon which petty differences had been sunk in a struggle for the general good, and that a spirit of professional brotherhood would speedily grow up to unite them still more closely together.

The PRESIDENT then declared the meeting at an end.

THE DINNER.

In the evening the members of the Irish branch and the English delegates of the Association, with a few visitors, dined together in the board room of the Royal College of Surgeons. Mr. Daniel Corbett, senr., President of the branch, occupied the chair, upon his right being Dr. Anthony Corby, President of the Royal College of Surgeons of Ireland, Mr. J. Smith Turner (London), Mr. W. H. Waite (Liverpool), F. St. Barlie Taylor (Waterford), W. Booth Pearsall (Honorary Secretary Irish Branch), G. W. Yeates, J. McC. Smith (Dublin), C. Rogers (Wexford), Charles Wall (Dublin), A. W. W. Baker (Dublin), A. S. Underwood (Editor B.D.A. Journal), R. H. Moore (Dublin, Vice-President), I. T. Corbett (Cork), F. McClean (Dublin), R. T. Stack (Dublin), J. O. Duffy (Dublin), R. Hazleton (Honorary Treasurer, Dublin), &c.

The Royal toasts having been duly and loyally honoured, the PRESIDENT said that they were there on the threshold of greatness. They had a very glorious task to perform, and that was the exaltation to the highest pinnacle of excellence, the scientific profession of which he had the honour to be a member. The days were gone by when their profession was called a trade. They, by their united efforts and by following the example set them by their seniors in the profession, could still further elevate the status of their profession. He considered that he might be excused if he dilated a little upon the advantages which the public would experience through their instrumentality. In order to make that more manifest, and to give greater confidence to those who sought their professional assistance, they associated themselves now with the colleges of surgeons. For a time those colleges were loth, perhaps, to recognise them as a professional body at all,

but he thought they had given them very convincing proof that in the practice of the dental surgeon there is something more than simply pulling out a tooth or stopping one with either the precious metal or the base. Their efforts, he begged to say, would be directed to the removal of everything that was base from their practice. Their duty would be to see that every individual member of their profession practised it with honour to himself and to the interests of the public. In order to attain that they had affiliated themselves with the Colleges of Surgeons of both England and Ireland. The advantages, as he had before observed, to the public would be great, and to themselves perhaps individually not less. He urged them to put their shoulders to the wheel of that machine of progress and reform to which that day they had imparted momentum, and let their motto be "*Vires acquirit eundo*," and concluded by proposing the "Colleges of Surgeons of England and Ireland" associated with the name of the President of the Irish College who had honoured them with his presence that evening.

The toast was cordially drunk.

The PRESIDENT of the Royal College of Surgeons of Ireland, in responding, said he felt extremely glad that the opportunity was afforded him, as his old friend Mr. Pearsall's guest, of meeting the members of the British Dental Association. With reference to what their President—the first President, he believed, of the branch which he had the honour to address—said, he believed it was a very long time since any man of rational mind regarded the dental profession only as a trade. He (Dr. Corby) was happy to say that since he had had the honour of belonging to the medical profession, such ideas were never broached in his hearing, and he must say, speaking for the College which he represented, that whenever the interests of their dental friends were brought before the college, they tried their best to promote them in every way, which they thought not only most conducive to the interests of the dentists, but which made them feel that they were a part of the surgical profession. The Royal College of Surgeons of Ireland established a dental licence in their college, and on several occasions, whenever the interests of the dentists were before the Council, his friend Dr. Stack and himself had worked together to advance them. The chief impulse of that work was the idea that they could assist the dentists in the effort they were making to bring their branch of the profession on to a level with his (Dr. Corby's) own; and he felt that in everything he could do in that direction he was not only advancing their interests, but upholding the dignity of surgery. He might say that as to the connection between dentistry and surgery, he rejoiced to see amongst those present one who had been a pupil, and some who had been fellow students and colleagues. He could add also that a number of dentists in the city of Dublin had endeavoured to make their voices heard in that College

by taking out the Fellowship. In that way they could materially influence the working of the Council in a direction that would be conducive to the weal of the dental profession and consequently of the surgical profession. He might say that they had the English College represented that night in the person of his friend the President, who had been a worthy representative of that College in the city for many years. He could only say in conclusion that it had afforded him the greatest possible pleasure to give them facilities for the holding of these proceedings within the walls of this college. Dr. CORBY then proposed "The British Dental Association and its Irish Branch." He said they had just recently enjoyed the visit of the British Medical Association, and the members of that visit reminded him that the Association, whose success he was then toasting, had been formed and had flourished, as he was informed, for seven or eight years upon similar lines. It was, in point of fact, a means of protecting gentlemen on the Dental Register, of bringing them together for consultation purposes, of causing them to make their wants known, in order that they might influence public opinion, and in order that they might influence legislation, so as in every way to raise the status of the dental profession, and to make it not only an honour to itself, but an advantage to the public. He understood that upon this occasion they were inaugurating a branch; that though there were branches in other parts of the kingdom, for the first time a branch had been inaugurated in Ireland, and he could see that it had been accomplished under very favourable auspices. A good many of the men who had attended their meeting, and who now met around that festive board, did so for the first time. Perhaps there was nothing that could possibly indicate or exemplify in a more marked degree the beneficial and improving tendencies of such an association as this, than the fact that all men on the Dental Register who practise dentistry, when they met on an occasion like this, could show their equality and put their rights before the older branch of the profession -- if he might describe his branch as such, and claim the due relationship to it. And when they had an Irish dental branch meeting there, as this branch had met to-day, and associated with the parent Association of the United Kingdom, he was satisfied that nothing but good could result either to the dental profession or to surgery in general. The relations of the purely surgical and dental branches of the profession could be best understood by hearing what the dental branch had to say for themselves, and by knowing what their wishes were. No illustration could show more emphatically the importance of combination in the present day than the association which had just visited Dublin--the British Medical Association--and this association was capable of doing the same kind of work. He now begged to give them the health of the "British Dental Association," coupled with the name of Mr. James Smith Turner, of London, and Mr. Waite, of Liverpool.

The toast was enthusiastically drunk. The CHAIRMAN called on Mr. Turner of London, and Mr. Waite of Liverpool to respond.

Mr. J. S. TURNER in responding said that the objects of the British Dental Association were various. He would confine himself to dealing with only one or two of its primary objects. Its great object (he was happy to say this city had always been in the front ranks in furthering all educational efforts) was that of education. They had to educate in various directions. They had to educate themselves as a profession; first to remember that although they were possessed of an Act of Parliament, and had been made into a profession legally, they must look to themselves to become a profession in reality besides in name. No Act of Parliament would make a gentleman. No Act of Parliament would make a professional man. A professional man was always the growth of ages. He was a sort of being who had been evolved from generations of education, and each generation seemed to have been enabled to influence the succeeding generation. And in proof of what he said they would find that the medical profession, which they took as their present standard, was in a far higher position now as a profession, and its members were far more highly educated, than they had ever been before. That resulted from a very long course of education. Now for themselves, they must remember that while the medical and surgical professions generally were far up the ladder—while they had been working for more than half a generation directly under the influence of valuable medical acts, while they had been combining in the British Medical Association for many years, and had had a literature of their own, and a powerful and well-conducted series of journals—the dental profession were only beginning, and they must lay that to heart, and remember that a great deal depended upon the effort which every one of them would make to elevate their profession, and it would only be by so doing that they would ever realise the advantages which had been conferred upon them by the legislation of the country. They must endeavour to make themselves professional men also, by taking advantage of the literature which had grown up around them in their own special branch of medicine and surgery. Their literature now was very much what it ought to be in many respects, based upon literary and scientific principles, and it was to the scientific part of their literature that they must look for that power which would enable them to practise their profession with comfort to themselves and with advantage to the public. They had, further, to educate the public. They knew very well that dentistry had hitherto stood in very low esteem with the public generally, partly from causes which were outside it, because it had had no legal status, and partly because any man or any charlatan was able to call himself a dentist, and the public estimated a dentist as it found him, quite unfit to be esteemed as a professional man. Now they had to fight against

this long, deep-rooted, very reasonable and rational prejudice. That they must do ; but fortunately they could do so, and by the aid of the public press, which had been their friend hitherto, let the public know that there are dentists and dentists, and that although the Dentists' Register in its inception had to allow a large number of names to appear upon it compulsorily, inadvertently in many cases and illegally in others, still in each case there were conditions which could not be reached, that although a large number of unworthy names were on the Register, there were still on the Register a large number of competent men who were anxious and willing, and had qualified themselves to take the position of professional men, and who should be willing to serve in ranks, and the Association would be willing to serve them if they would only be guided by common sense. That was one of the objects of the British Dental Association. They who belonged to it sought, first, by their own example, to encourage each other, and to combine together to enlighten the public as to the kind of dentist who is willing to serve them, if they are only willing to employ him. Then they had still further to go. They had to educate the rank and file of the medical profession. He had been extremely encouraged to-night to hear the speech which they had the pleasure of listening to from the President of the Royal College of Surgeons in Ireland. They had had like encouragement from the President of the Royal College of Surgeons of England, and the President of the Medical Council was kind enough to come and preside over them in Leicester Square, and to give away the prizes won by the dental students in the Dental Hospital. Those were encouraging symptoms. They were greatly indebted to the Royal College of Surgeons in Ireland for the course it had pursued in reference to dental education and dental legislation. He was sure he was speaking the sentiments of all present, though some time ago they were hearing pretty considerable obloquy cast upon the College of Surgeons in Ireland, because it was considered that they distributed their diplomas too freely. The Irish College of Surgeons, by their prompt granting of their dental diploma, induced by their liberality other licensing bodies to do the same — bodies which would probably have held back much longer had not the College of Surgeons in Ireland shown them the way. It had been objected that the College of Surgeons in Ireland gave diplomas without a curriculum, but they did not give those diplomas without examination ; and though in some instances men who seemed unworthy of having those diplomas seemed to get them, all he could say was that the very same thing happened now in institutions who gave diplomas only after a curriculum ; and the College of Surgeons took the view, very rightly, that if they could get a large number of men with the dental diploma, they would increase the respectability of the dental profession, and they would increase the self-respect of the men who had those diplomas, they would strengthen the dental Register, and thereby confer upon

dentists, in the infancy of their movement, an incalculable benefit in adding to the strength which they so much required. The members of the Association, then, had to seek and to educate the medical profession. They must let the medical men know and feel that they did not mean to assume a professional position without paying professional toll. They must remind them that the curriculum which they followed was equivalent to the curriculum which the general medical practitioner had to follow, and possibly it might be shown that it was more expensive and that it involved a little more time. But they were willing to waive that as long as it was recognised that they were not going to appear before the public as professional men unless they gave to the public a certain amount of time, education, and consideration for the position which they sought to occupy. But medical men were apt to think that anything would do for a dentist, and that anything was good enough for dentistry, and one continually met charlatans—men who had no claim to the title of dentist, men who even practised dentistry without using the title “dentist,” so that they might evade the law—and they would find those men taken up and publicly countenanced by medical men. A medical man who had been in the habit of administering anæsthetics for a notorious quack had received a well-merited rebuke from an influential medical paper. It was the duty of the Association to educate all round. They must educate the medical man, they must educate the public, and they must, above all, educate themselves. He was happy to think that to-night the Association had received an acquisition of strength, which would enable it to go forward for another year yet rejoicing. He hoped that that new branch would increase in dimensions and power and be a still further source of strength to the Association. He would now make way for his friend Mr. Waite.

Mr. W. H. WAITE of Liverpool, who was very warmly applauded on rising, said first of all he wished to tender an apology for the absence of Mr. Wormald of Stockport, who had fully intended to be with them but who, through accidentally entering a wrong train while on the way, had been precluded from reaching Dublin in time. He alluded to pleasant recollections of a visit to that College some nine years ago, when he, in company with some sixty other provincial men, was examined there for the Dental licence. He should always feel very grateful indeed to the Council of the Royal College of Surgeons of Ireland for the readiness with which they had availed themselves of the powers granted to them by the Dentists Act. It was by their promptitude and energy that between 300 and 400 of their fellow practitioners throughout Great Britain were rescued from the disability and disadvantage under which many of them had been suffering for a long time, and they had put within their reach a professional status and qualification which they had been unable to obtain elsewhere. Mr. Turner had already referred to the fact that there had been since that time some instances in which the authorities of this College had been

misled and their confidence abused, but he omitted to state one thing which he (Mr. Waite) felt to be a very important fact, and one which should not be forgotten, and that was that the Royal College of Surgeons of Ireland was the first of the licensing bodies, he believed, to adopt the precaution by which they are able to deal with such cases ; they had power to remove the names of any gentlemen from the roll who had violated the solemn oath and undertaking which they were called upon to make before they left that College. He was always proud to feel that there was that guarantee, in connection with the Irish diploma. He was very glad to have that opportunity there of publicly acknowledging the indebtedness to the College, which he knew a large number of English practitioners felt on account of their extreme readiness and promptitude at the time the Act was passed. It had come to be generally conceded now that the institution of a dental examination and the establishment of a dental department, in connection with the licensing bodies of Great Britain, marked one of the most important advances which had taken place in connection with dental surgery during the last ten or fifteen years. He felt gratified at being allowed to take a very small share in the event which had occurred that afternoon, and which he could not but regard as another important step in an onward direction. The formation of the Irish branch of the British Dental Association could not fail to be a great boon to the dentists of Ireland. Experience showed that branch meetings furnished opportunities for personal intercourse and gave occasion for unrestrained communion of thought and interchange of idea on all professional topics, and must lead to mutual improvement and encouragement in the exercise of their every-day work. The establishment of these branches was a direct boon to the public, because whatever advantage the profession derived must prove beneficial to those with whom they had to deal. There was yet another benefit which it conferred ; it enabled them to keep an eye upon those cases, which, unfortunately, were to be found in the city of Dublin as in every large city of the United Kingdom—those cases of individuals who were trying to evade the law and who were actually breaking the law, and generally an association like the British Dental Association, with its executive in London, could not undertake the unravelling of these cases. The great power of the branches, apart from a professional and legislative point of view, was that they had the opportunity of investigating such cases as he had indicated, and they could become acquainted with the details in such a way as to present a complete case that could be dealt with, if necessary, through legal process. Now that would be part of the duty of the Irish branch, and a very important part, for some time to come. He could assure them that their experience in some of the districts of England was that the mere existence of a branch—the very knowledge that the machinery is thus laid down for dealing with those cases—had a great moral influence upon those

trying to break the law, and he thought the Irish branch would find what had been found in England, and that there would be a marked diminution in that low class of advertising which was such a disgrace to any profession. But the existence of a branch was not to be a mere personal benefit to themselves, nor was it to be a mere political machine for the punishment of offenders. There was another, and a very much higher and nobler function, in connection with the establishment of these branches, in that they afforded opportunity for the development and exercise of any gift that they might individually possess, and which might be made contributive to the general well-being. They did not come to those meetings simply to get all they could for themselves. They came to impart; and when they had learnt the truth "It is more blessed to give than to receive," they would enter into the "holy of holies," and experience the highest blessing that mortal can enjoy. Hitherto the absence of such an organisation in Ireland had prevented proper inter-communication. This had been felt for some time, and he could assure them it would rejoice the hearts of many English brethren to hear of this meeting in Dublin to-day. The establishment of a branch like theirs conferred privileges, which were to be understood, to be acted upon, and the enjoyment of these privileges belonged to those who were willing to make self-sacrifice. If they wanted the British Dental Association to be a success, they must make their branch a success. He was exceedingly glad that they had begun under such good auspices. They had five gentlemen for their officers whose names were thoroughly well known and highly esteemed throughout the United Kingdom—men capable of leading them on to a successful career. He had come to Dublin that day in the hope that the establishment of that branch might have the effect of drawing Irishmen, Englishmen, and Scotchmen a little closer together, not merely because they followed the same profession, but because they belonged to the same great family, and spoke the same language, and because they ought to understand each other, and to respect each other much better than they had done in the past. He was sure he was interpreting the feelings of his friends when he said that their hearts were very warm indeed to their brethren on this side of the Channel. They had come to attend that gathering at great personal sacrifice and inconvenience, but they had come gladly to hold out the right hand of fellowship. They had come to declare on behalf of English brethren that they desired to cultivate all those relations of mutual regard, which ought to exist between those who have been enlightened and elevated by education and by many social advantages. They looked forward with great hopefulness and confidence to the future of this Irish branch of the British Dental Association, and if in any small degree his friends and himself might be regarded as representing the executive parent body, then they wanted to tell their Irish brethren that it would be always the

privilege and pleasure of his friends and himself to do whatever they could (consistently with their duty to the other branches), they would be always delighted to do what they could, to promote the prosperity and secure the success of this their eighth and youngest child.

The VICE-PRESIDENT (Mr. Robt. H. Moore) then proposed the toast of "The Visitors," and expressed regret that the duty had not fallen to some one more capable of doing it justice. He thought that after the able and exhaustive speeches to which they had just listened, his own want of eloquence would be less felt. He begged to propose the toast of "The Visitors," coupled with the name of Mr. Underwood. The toast having been cordially drunk,

Mr. A. S. UNDERWOOD, in responding, said that as he had again to respond to a toast, he need not detain them many moments over this one. One word he had to say, and that was that it had been more than once very kindly attributed to them as a virtue, that they had taken a great deal of pains to come over to Ireland. Now it seemed to him that that was one of those virtues that was distinctly its own reward, and he felt that if that was the road to virtue, it was a very easy one, and one that he should like to tread more often. There was one more word that he ought perhaps to add, and that was, beautiful as their city of Dublin was—and as that was his first visit they might imagine how deeply he was impressed by its beauty—universally well known as their hospitality was, it was not their hospitality nor the beauty of their city that had brought their visitors there, but it was the forging of a new link that would bind them more closely together in the future, both individually as fellow practitioners and friends, and collectively as a branch of the Association; he thought that new link was not likely to be broken and would not easily wear away.

Dr. THEODORE STACK said, that the toast he was called upon to propose was that of "The Press," more especially the Medical and Dental Press. A great deal of his professional knowledge, such as it was, had been derived from the hints that he had received from the perusal of the best periodical dental literature. It was a great satisfaction to all those men who belonged to the British Dental Association, to reflect that intimately connected with the editorship of the Journal of the Association, and with its successful publication, was the name of a gentleman who had already written a work that must have proved most valuable to many practising dentists. As regarded the Journal of the Association, the most important information was afforded them in its pages, chiefly, of course, from a professional aspect. Those valuable hints which were given to them, and the concise reports of scientific meetings, proved a most useful source of intercourse with their professional brethren on the other side of the Channel. In addition to that the Journal is a constant stimulant to them to adopt the right tone in the practice of their profession. The establishment of this branch had had its origin in

an article in the Journal of the Association. The kindly feeling towards us of the men on the other side of the Channel being well known, and the minds of men on this side having been more or less prepared, that little incentive which would sometimes be the proximal cause of a great movement (and he hoped this evening marked an era in Irish dentistry), in the formation of the Irish Branch, was supplied by the publication in the Journal of a stimulating article on the subject. He had the pleasure and profit of being in England last year with a number of men who were around that table at the meeting of the British Dental Association, and nothing could have been more cordial, or more encouraging than the little feelers thrown out, the little stimulus suggested for the formation of an Irish branch. The winter went by and the spring was nearly ended, when there appeared this article in the JOURNAL OF THE BRITISH DENTAL ASSOCIATION, and the result had been that now before another annual meeting they had a prospect of an Irish branch. Now he thought he might claim for Irishmen, perhaps a pretty well-known attribute of their character, and that was that they were never found to be in a great hurry ; but that they are supposed to be pretty fair labourers, once they undertake a job, and he trusted that that pretty general opinion of their Hibernian brethren would be fulfilled in the action of the individual members of that branch. He believed that there were certain men whom it was hard to move, who made protests perhaps against entering movements of this sort, but he believed often it would be found that those men who had entered with the greatest caution, once they had entered, were the most firm supporters of movements such as that in which the dental profession were now engaged. That might seem a little by the way, but it in reality all proceeded from the article in the Journal of the Association, that prompted their action. Under these circumstances he thought it was singularly appropriate that they should propose the toast of "The Press" in general, but the Medical and Dental Press in particular, coupled with the name of Mr. Arthur Underwood. The toast was cordially drunk.

Mr. UNDERWOOD, in responding, said that he wished to touch on a very few matters in connection with that toast. First of all, the Journal might seem a very pleasant thing at present ; their dealings with it probably consisted in looking here and there over it and then putting it aside. A more intimate connection with it might show those who were officially mixed up with it that it had its irksome side, and they might find that its pages were not all, perhaps, that they desired. He wished to ask them to recognise the great difficulties that the executive of the Journal have to contend with. It was absolutely impossible to deal with the amount of matter that came in to them in such time as to make everything appear in due season. For instance, just now they had a great many annual meetings taking place all over the kingdom, and at each of these

annual meetings there were several good and valuable papers. These all poured in at once, and it was impossible that they should all appear in the September number of the Journal. They must not think their contributions were lightly thought of because they were sometimes held over. It was one of those things that was inevitable, so long as they could not afford to run a heavier Journal than at present existed. Another thing that he wished to mention was that the Journal, through him, would try to represent their views as fully as possible, and towards that end it was desirable that the secretaries should keep him constantly posted as to current local opinion before the 5th or 6th of each month. The Journal ought to be the mouthpiece of the Association and its branches, and he would, with their help, endeavour to make it so. He wished, in conclusion, to thank them very much for drinking the health of the Journal, and for the more than kind reference to his little *brochure*, which, however, he did not think was even deserving of mention.

Dr. A. W. W. BAKER proposed the toast of "The Officers of the Irish Branch of the British Dental Association." He was sure that the officers they had elected that day would in every way guide them forward to prosperity and success, under the experienced care of Mr. Corbett and Mr. Moore, during the session that was approaching. They need not fear to extend an invitation to the British Dental Association to come and visit them in Dublin next year. He did not think they could have possibly chosen a more genial treasurer or a safer guardian of their funds than Mr. Hazleton, and as for Mr. Pearsall's well-known energy, they could not have a better guarantee of it than the way in which he had got up the dinner that evening. With such a very happy beginning, and the hearty co-operation of all the members, their period of office would be rendered a peculiarly pleasant one, so that when the British Dental Association came to visit them next year, they would find them ready and willing to give them a hearty welcome. The toast having been duly honoured,

Mr. ROBERT HAZLETON (Hon. Treasurer) returned thanks for the kindly way in which the toast had been proposed, and the heartiness with which it had been received. As far as his own position of Treasurer was concerned, he should at least try to do his duty faithfully, though he had not met with any money yet. He was sanguine about the financial prospects of the branch. He fully agreed with all that had been said by previous speakers in favour of working with the parent Association for the good of the profession at large.

Mr. W. BOOTH PEARSALL (Hon. Sec.) also responded. He said he occupied that night a position of peculiar pleasure, and he might say, of pride, when he saw around him men who had been for years estranged from one another, from what cause he knew not, but who were now united. He hoped that one of the watchwords of their

Association in Dublin would be "dental unity." They all felt indignant when they saw men, who ought to know better, behaving unprofessionally. But hitherto there had been no way of reaching them, and their professional hide was as impenetrable as the hide of a rhinoceros. After the speeches of Mr. Turner, Mr. Waite and Mr. Underwood, they could take courage in entering upon the new course. But they should do their duty fearlessly in discriminating what was right from what was wrong. He himself had so felt the importance of the dental licence that he had resigned his examinationship, when he thought the diploma was being made too cheap. He felt a strong sympathy with all who were struggling to act professionally, whatever their diploma or qualification might be—a sympathy that sprang from a long upward struggle on his own part. So that his mind being in favour of helping all reputable dental practitioners who cared to prepare for and present themselves for a genuine examination *sine curriculo* but who had not had the opportunity of doing so in the past, they could understand how fully he sympathised with the worthy dental practitioner in practice before July, 1878, as well as with those members of his profession who had obtained surgical training and diplomas. But his mind was firmly made up that he would not endorse the examination papers of men who were deficient in the practical knowledge that was required for a dental practitioner engaged in the practice of his profession. Dental unity would be the great effect of their labours, and they were to create themselves a great political power in that way. They were also to promote professional feeling of the best kind in the way of scientific investigation of the diseases that they had to deal with, and in the way of making their profession one that any man should be proud to join. He thanked them for the very kind way in which they had associated his name with the toast. Seventeen years ago he had approached the Royal College of Surgeons with a view to granting the dental licence, but then his efforts had not proved successful. He was glad to say that Mr. Turner had taken a favourable view of the action of this College with respect to some of these matters in reference to which he had himself felt rather sore. The licence was protected by a very stringent clause or regulation, with respect to which other colleges had followed their example. He was very proud to think that the profession had at last resumed its due place in the public estimation, and recognised as a force in Great Britain and Ireland, and he thought that profession should have been so recognised long before. The President and Vice-President of the Irish branch had done yeoman's service in elevating and promoting the honour of their profession, and the members might well feel it to be a duty and a pleasure to follow in the footsteps of Messrs. Corbett & Moore. He saw around him representatives of his profession, not only from Dublin, but from the north and from the south. He was sorry to say that they had not one from the west. Well, he had no doubt that every gentleman who had come there to-night

would be actuated by a higher sense of duty towards his profession in the future. He hoped they would be bound together by a strong sense of brotherhood, as the medical profession was so bound, and he hoped that in the future they would have no misunderstandings. The fact of the establishment of a branch of the British Dental Association in Dublin created in his mind a great many points of contact. He would look upon himself as the servant of the Association, and he would do all he could, with the help and sanction of his colleagues of the branch, to make the branch worthy of the British Dental Association. He hoped the traditions of Irish medicine and surgery would live in their hearts, and that they would endeavour to make their meetings not only professional, educational and scientific, but to look upon it as their duty to do anything they could to advance the dignity of their profession, not only in Ireland, but in the United Kingdom. He thanked them very heartily for the splendid compliment they had paid him in electing him their honorary secretary.

Mr. JOHN O'DUFFY proposed a warm vote of thanks to the President and Council of the Royal College of Surgeons for their kindness in allowing the branch to meet and dine in the College rooms. It was a great matter that they had been recognised by the Royal College of Surgeons, who had not only given them permission to hold their meetings within the College walls, but had allowed them to meet there in a convivial manner and enjoy themselves as they had done. He therefore proposed that the marked thanks of the dental profession, and particularly of the Irish Branch of the British Dental Association, be given to the Royal College of Surgeons of Ireland, for their kindness in permitting them to assemble there that evening, and to inaugurate the branch.

Mr. CAMERON ROGERS said he seconded Mr. O'Duffy's proposal with the greatest possible pleasure. There had been a great deal of correspondence lately, as to whether dentists should consider themselves surgeons or not. He was one of those who was proud to be associated with the influential medical profession ; its power was indeed great ; the most powerful monarch on earth, and the pope himself, would in their last extremity have to place themselves in the hands of their physicians.

The proposal was agreed to *nem. con.*, and

The PRESIDENT of the Royal College of Surgeons expressed his acknowledgments on behalf of the Council and himself. He would convey to the Council their vote, and if they were as much gratified with the cordiality of its adoption as he had been with his experiences of that evening, there would be no room for regret. He hoped he would have the pleasure of meeting them there often again.

The company then separated.

The Annual General Meeting.

THE Annual General Meeting of the Association was held in the Hall of the Faculty of Physicians and Surgeons, Glasgow, on Thursday, August 18th.

Sir EDWIN SAUNDERS, President, in the chair.

There was a large attendance of members :—

Adamson, W. M., Glasgow.
Alexander, M., Liverpool.
Amoore, John, Edinburgh.
Andrew, John J., Belfast.
Ash, William H., London.

Biggs, John A., Glasgow.
Browne-Mason, Charles, Scarborough.
Browne-Mason, John T., Exeter.
Brownlie, J. R., Glasgow.
Brunton, George, Leeds.

Cameron, Donald R., Glasgow.
Cameron, James, Glasgow.
Campbell, M., Dumbarton.
Canton, F., London.
Campion, George, Manchester.
Coffin, W. H., London.
Coxon, Stephen A., Wisbech.
Crichton, John N., Perth.
Crombie, P., Aberdeen.
Cumming, James, Glasgow.
Cunningham, Geo., Cambridge.

Dall, William, Glasgow.
Dent, J. W., Stockton-on-Tees.
Durward, J. Stewart, Edinburgh.

Ewbank, F., London.

Fernald, H. P., Cheltenham.
Finlayson, M., Edinburgh.
Forrester, W., Edinburgh.
Fothergill, John A., Darlington.
Fothergill, Wm., Darlington.
Fraser, Hugh, Greenock.

Gaddes, Thomas, London.
Gill, H. Beadnell, London and Norwood.

Hardie, W. J., Montrose.
Harrison, Richard, London.
Holland, J., London.
Hutchinson, S. J., London.

Jones, Alfred, sen., Cambridge.
Jones, Alfred, Cambridge.
Jones, W. G. Gordon, London.

King, Robt., Edinburgh.
King, Roff, Shrewsbury.
King, Thomas Edward, York.
King, W. F. H., Newark.
Kirby, Amos, Bradford.
Kluht, Henry J., Bayswater, W.

Ladyman, W., Liverpool.
Lennox, R. P., Cambridge.
Lipscomb, J. Moore, Kilmarnock.

MacGregor, Malcolm, Edinburgh.
Martin, W. F., Glasgow.
Mason, Henry B., Exeter.
McCash, James M., Glasgow.
McStay, J., Belfast.
Melville, John, Glasgow.

O'Duffy, John, Dublin.

Palethorpe, W., Birmingham.
Payling, R., Peterborough.
Pearsall, W. Booth, Dublin.
Pike, J. Lee, Sheffield.
Price, Rees, Glasgow.

Rogers, Richard, Cheltenham.
Rymer, James, London.

Saunders, Edwin, London.
Sherwood, Martin, Oxford.
Shillinglaw, Wm., Birkenhead.
Sinclair, C. S., Glasgow.
Smale, Morton, London.
Smyth, Alexander, Glasgow.
Stack, R. Theodore, Dublin.
Stirling, John, Ayr.
Storey, J. Charles, Hull.

Taylor, William, Glasgow.
Thomas, H. J., Swansea.

Tomes, Charles S., London.
Turner, James Smith, London.

Vanderpant, F. J., Kingston-on-Thames.

Waite, W. H., Liverpool.
Walker, P. S., Dundee.
Wall, Charles, Dublin.
Watt, J. Ross, Leamington.

Wells, John, Berwick-on-Tweed.
Williams, E. Lloyd, London.
Williamson, W. H., Aberdeen.
Wilson, Andrew, Edinburgh.
Wood, James, Edinburgh.
Woodburn, W. S., Glasgow.
Wolfenden, A. B., Halifax.

Young, A. B., Glasgow.
Young, John C., Warrington.

The Representative Board Meeting.

THE proceedings commenced as usual with the meeting of the Representative Board at nine o'clock on the morning of Thursday, August 18th, Mr. J. SMITH-TURNER in the chair. The following members of the Board were present : Sir Edwin Saunders, Messrs. S. J. Hutchison, C. S. Tomes, Charters White, W. H. Coffin, G. Cunningham, R. Rogers, G. Brunton, R. T. Stack, W. H. Williamson, J. A. Biggs, T. E. King, W. H. Waite, H. B. Mason, J. R. Brownlie, Rees Price, F. Canton, and Morton Smale.

The minutes of the previous meeting having been read and confirmed,

Letters of apology for absence were announced from Messrs. Storer Bennett, R. F. H. King, T. A. Rogers, Simms and Humphrey.

The question of the Dentists' Register was considered, and it was resolved that twenty-five copies of the Register, in order of place, should be made and distributed to the secretaries of branches, with a view to each branch taking cognisance of deaths in their own districts, in order that care might be taken that death certificates might be forwarded to the medical Registrar or to the Honorary Secretary.

The PRESIDENT announced that an Irish Branch had been formed ; it was affiliated to the parent society, and Mr. Pearsall, the Secretary, was admitted a member of the Board.

The chair was then taken by Sir EDWIN SAUNDERS, and a letter of resignation from Sir John Tomes as President of the Representative Board was read (see page 552) and the Secretary was requested to read it at the Annual Meeting.

Mr. SMITH TURNER was then elected President of the Board,

and having resumed the chair, thanked the meeting for the confidence they had expressed in electing him to that honourable position.

Mr. Felix Weiss was chosen as Vice-president.

The annual meeting for 1888 was considered, Dublin and Birmingham having both sent invitations ; it was decided to leave the selection to the General Meeting.

The list of names of the gentlemen to be elected as members of the Representative Board was considered, and it was resolved to recommend the names of certain gentlemen, and these were subsequently elected by the Annual Meeting.

The Business Meeting.

THE general meeting of members for the transaction of business was held at 10 o'clock, Sir EDWIN SAUNDERS, President of the Association, occupying the Chair.

THE HON. SECRETARY (Mr. Morton Smale) stated that he had received letters from Mr. Storer Bennett, Mr. Alfred Hill, Mr. T. A. Rogers and Mr. R. F. H. King, regretting that they were unable to be present.

THE PRESIDENT : The first business which comes before us is one which we receive with mingled feelings. It is that of the resignation of Sir John Tomes of the office of President of the Representative Board of our Association. I am afraid that we must accept this as final. He was induced last year to withdraw it for a year, but his inability to attend the meetings, as he has explained, renders him unable to hold out the prospect of any longer being President. At the same time he is quite ready on all occasions to give us his valuable advice in all cases of difficulty, and this will be invaluable to us, because no man probably is better able to advise us when any questions of difficulty arise, from his long observation and experience of everything connected with our institute, and from the singleness of purpose with which he has at all times devoted himself to the interests of the Association. I will now ask Mr. Morton Smale to read the letter of resignation from Sir John Tomes, which also contains some valuable advice for our future proceedings.

Mr. SMALE then read the address as follows :—

THE ADDRESS OF SIR JOHN TOMES ON RESIGNING THE
PRESIDENTSHIP OF THE REPRESENTATIVE BOARD.

GENTLEMEN,—The time has arrived, if it has not over passed, when it becomes my duty to resign the Presidentship of the Representative Board. I have held this position of trust and of responsibility ever since the formation of the Association, and at the Cambridge meeting I accepted my re-election for a further term of three years, with the understanding that whenever the Medical Bill then contemplated by the government became law, I should resign my presidency. The Medical Act, 1886, has with its dental clauses now come into operation, and so far as can be seen, any legislation affecting the dental profession lies in the far future. So long as legal changes were undetermined, I felt that I might be able to render some service to the profession. Now that the contemplated changes have been made, there are other members of the Association who can discharge the duties of the presidentship far better than I. Indeed, those duties have for the most part been discharged very effectively and faithfully during the last three or four years by your hard-working Vice-president, Mr. Turner, and I have, I fear, oftentimes received credit for work he has done. For my shortcomings I can only offer the valid excuse of a state of health which is believed to require complete indoor life during the cold months. My absence from your meetings in the past has been compulsory, and there is no reason to suppose that in my now short future, similar, if not more stringent, precautions will not be prescribed, thereby rendering my attendance at your future meeting impracticable.

Hitherto my absence has not, I think, been prejudicial to the interests of the Association, but a continuation of the practice does not admit of defence. Heretofore there seemed to be special reasons why I should not vacate the chair, but these have ceased to exist, and I have no longer any excuse for allowing my name to appear as your president.

Retrospect is the province of the aged, for they alone possess the personal knowledge of passed events by the progressive occurrence of which the present position has been gained. Had any one of these events been different, the present result would have been other than it is. Very shortly few if any of us will remain who practised in the time when a reasonable amount of dental knowledge and skill was limited to a few individuals, and those

were for the most part personally unknown to each other. To these survivors of an earlier state of things, the change for the better has exceeded in degree their most exalted expectations. In those days the rank and file was recruited from persons of low educational advantages and whose skill was limited to the work-room standard; now the profession is strengthened by the entrance only of persons of education and of tested skill and experience. The student when he has gained his diploma is more perfectly educated than is the member of any other profession of like standing, for during his professional education he has performed again and again all the operations and determined (under supervision) the treatment of every description of case he will in after years be called upon to treat; an advantage enjoyed by no other class of professional students.

Amazement is the feeling that takes possession of the mind, when those who have lived through and seen the great changes, think of the present state of perfection to which dental education has attained. To the younger members of the profession this may seem a strong statement, but they have not the personal knowledge of that which once was wherewith to compare that which now is. They have not felt the well nigh intolerable difficulties that stood in the way of obtaining an adequate amount of knowledge and skill necessary to the rightful discharge of professional duties. Difficulties which, by the very weight of their pressure, induced the reformatory efforts which, steadily pursued through a generation, have brought us to our present prosperous position. Aided by the legislature the progress has been continuous and by no means slow. The dental charter granted to the Royal College of Surgeons of England may be taken as the foundation stone of the preconceived structure, the beneficial working of which made the Dentists Act an achievable result. No reasonable person can doubt that both charter and Act have been in the highest degree useful and even necessary to the development of dental surgery as it is now known and practised in this country.

That each has imperfections needs no saying, for it is not in the power of man to foresee and guard against all possible contingencies. But the defects are limited to minor and relatively unimportant provisions, such as will be cured by the mere lapse of time alone, while other so-called defects are faults (perhaps not at the time wholly avoidable), in the construction

put upon the phrases of the Act by the Executive. One of these faults has been pointed out by the Master of the Rolls, and concurred in by the Lords Justices at the Court of Appeal. The educational provisions and the rules for the subsequent registration of the licentiates, constitute the substance and meaning of the Act. The penal clauses are of inferior importance, for the educated always have it in their power to surpass the uneducated in the pursuit of any subject requiring the exercise of knowledge and skill. The examination of apparently exceptional cases will generally reveal disastrous errors on the part of those whose success lay in their own hands; and the success of charlatans is very generally much over-rated by those who complain of their presence as competitors for practice. We should be stupid indeed if we could not profit by experience, and those who were actively concerned in framing the Dentists Act would—were the opportunity to recur—amend some of the minor details. The critic is often a non-constructive person who assumes a position of unproven superiority when he challenges defects in work he has taken little or no part in producing.

Judged from the standpoint of results, the Dentists Act has to my mind been a great success. Who can justly say that the educational results have not been in the highest degree beneficial to the public and the profession? and it will, in respect to fulfilling its purpose, compare favourably with any other educational Act. Furthermore, it requires that a list of the qualified, with a statement of the character of their qualifications, shall be printed each year, and provides also for the ready punishment of persons who pretend to the possession of such qualifications not having them. Beyond this Parliament firmly declines to go. The utmost limit in the way of protection to which the legislature will give its sanction has been, I believe, reached in our Act; and, if we were made the judges of the extent to which protection should be given to a profession not our own, I feel sure that we should not extend the limit beyond the line drawn by government for the protection of the dental profession.

Parliament has drawn a hard line separating the qualified from the unqualified, over which it will not allow the latter to pass. The penal clauses of the Medical Act of 1858 are much less clearly stated, and much less stringent than are the corresponding clauses of the Dentists Act. Yet the promoters of the Medical

Act, 1886, were unable to introduce clauses of greater stringency for the remedy of an acknowledged defect. In my opinion we shall exercise good sense by abandoning all thoughts of attempting the gain of greater penal powers, and by working with liberality of purpose within the lines of our sufficient Act.

Before concluding I wish to offer to the Board my sincere thanks for the uniform support I have received from its members, and for the great personal kindness with which I have been at all times and by one and all treated. To Mr. Turner I desire on this occasion, and in your presence, to express my gratitude for the ever willing help he has rendered me in the discharge of my duties, frequently doing work which rightly should have been done by me, and for the doing of which I have received the credit really due to him. I owe to him a life-long debt of gratitude, a debt I cannot discharge. It has been my earnest endeavour, and I trust I have not been wholly unsuccessful, to conduct the business of the presidency with strictly even handed justice to all parties interested, and with especial regard to the interests of the profession taken as a whole. If at any time personal considerations may seem to have had some influence they must have operated by misadventure, for most certainly I have endeavoured to my utmost to resist such influences, whenever the common interest was concerned. I have often been absent from your meetings, not willingly, but because I could not help it, because the state of my health during the last few years has obliged me to keep the house in cold or doubtful weather. I may once more well ask your forgiveness for this oft-condoned fault. I resign my position as an active member of your body with strong feelings both of regret and of gratification; I regret that the time has come when I can no longer pursue with energy and confidence in your midst, the line of action leading to the advancement in knowledge and skill, and to the maintenance of the honour of our useful calling. But I am grateful to have lived through a time when so much good work has been done, and to have lent a willing hand in the doing of it.

So long as I may live I shall be ever glad to do all in my power in the interests of the profession, the practice of which has enabled me to spend these latter and poorer days of life, if not in affluence, yet in ease. Any counsel I may give or opinion I may in the future offer must be taken for what it is worth, divesting it of all personality, and before any action is taken thereon it must

have become the opinion or counsel of those who take upon themselves the responsibility of action, for they, not I, must be answerable for the results.

My professional career now comes to an end, and, as your President, I bid you farewell.

The PRESIDENT: Gentlemen,—I am quite sure we did wisely in allowing this farewell address, with all its pathos, its sincerity, its disinterestedness, and its tenderness of recollection to be placed before you. Although it was strictly addressed to the Representative Board, I am quite sure that in listening to this address we feel that we should not do wisely to ask Sir John Tomes any longer to continue the position which he is desirous of resigning, and we are glad to know that since his recent severe illness he is really in a satisfactory state of health, only that it is necessary that he should be extremely careful of himself, and we know that as long as he lives his heart will be with us, and he will sympathise in all that we do, and all that happens to us. I trust that you will accept a resolution which I have worded, subject to any emendation that you should think proper to suggest, which runs as follows:—"That this meeting, while accepting with great reluctance the resignation of Sir John Tomes as President of the Representative Board of the British Dental Association, desires to record its deep sense of the value of his services in the cause of dental reform and professional organisation, and especially of his vigilance during the long period of impending legislation in medical matters, which has resulted in securing a full recognition and place for dental surgery in the recent, and probably final, Medical Amendment Act of 1886."

Mr. SMITH TURNER: Sir Edwin Saunders and gentlemen, I think the resolution which has been placed before you is so all-sufficient and comprehensive that I need scarcely say one word in support of it further than bearing my testimony to the description which it gives of Sir John Tomes' services to the profession. I have had the honour and pleasure of working intimately and personally with Sir John Tomes for over twelve years, and I believe that if I have expended a great deal of strength and time I have been the gainer, for, to associate intimately with such a man as Sir John Tomes, especially in delicate business matters, is of itself a valuable education. I have great satisfaction in being allowed to second this vote of thanks to Sir John Tomes, which has been placed before you by our President.

Mr. WAITE (Liverpool) : I should like to be allowed to add one word, as representing in some sense those living in the provinces, in support of the resolution which the President has proposed, and which Mr. Turner has seconded. Sir John Tomes has commanded universal confidence throughout the profession, which can only be the product of long experience and wisdom, and judicious conduct of our affairs. He carries with him into his retirement the satisfaction of having accomplished reforms that will last for generations in the interest of dentistry, and still further, the testimony of a good conscience that he has done what he could on behalf of those in whose interests he laboured. I have great pleasure in supporting this motion.

The motion was then put to the meeting, and unanimously agreed to.

The PRESIDENT : The vacancy caused by Sir John's resignation has been filled by the Representative Board electing the Vice-President, Mr. Turner, for this office. I think I may take those cheers as a distinct approval of the action of the board in that matter. To fill the vacancy thus caused in the Vice-Presidentship, Mr. Weiss, a gentleman favourably known to us, who represents perhaps another section of the profession, and who is distinguished alike for his literary ability and for his large experience in professional matters, has been elected to succeed Mr. Turner in the Vice-Presidentship.

Mr. CANTON (the Hon. Treasurer) : Sir Edwin and gentlemen, I am sure we shall all deeply regret the resignation of Mr. James Parkinson as Treasurer, more especially as the cause of his resignation was ill-health, and I trust that this meeting will sympathise with him in the state of his health. I have to state that there are about 180 members in arrears in subscription for one year, and nineteen for two years. Our balance at the bank is £589 16s. 2d. I should like to see the subscriptions paid up more regularly than they are, and a very easy way for doing that is to give an order on your bankers, and to pay the amount at the beginning of each year. I am glad to report that a few of those members whose names were obliged to be removed for non-payment have paid up their arrears and again joined us. That is what we always hoped would be the case.

The adoption of the Treasurer's report was moved by Mr. BROWNE-MASON, and seconded by Mr. ROGERS, and carried.

The HON. SECRETARY then read his report as follows :—

JOURNAL OF THE

tive have much pleasure in placing
, not entirely devoid of interest, of
, under the able Presidency of Sir

e formation of a new branch. I re-
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ue great praise and many thanks for
he Association, for to him we owe
branch. To our worthy Vice-Presi-
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York the Representative Board has
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it by at once placing themselves upon

s. Cunningham and Fisher have been
Sir John Tomes; a copy of which
ssue of the Journal, and circulated
Army, Navy, and Civil Service.

Mr. Arthur Underwood continues to merit the praise of the Association for the able manner in which he discharges the duties of sub-editor of the Journal.

The numerical strength of the Association continues to increase; the number of members last year was 607, while to-day it is 645, showing an increase of thirty-eight, but only nine were removed for non-payment at the end of last year, against sixteen in the year previously; there has been only one resignation against six, and two deaths; one of the deceased was a familiar face at our annual gatherings and a member of the Representative Board—Mr. Mahonie, of Sheffield; the actual number of new members, therefore, during the year, is fifty against sixty-nine last year. It behoves us to see that the lessened increase is only due to the fact, that most of the reputable members of the profession are already members of the Association, and to endeavour to impress the younger members of the profession with the importance of joining our ranks.

Your executive has to report several official resignations, viz. : Sir John Tomes, President of the Representative Board; Mr. James Parkinson, Treasurer; Mr. F. Canton, Secretary; Mr. T. A. Rogers for the Representative Board. In the place of Sir John Tomes your Board has, to-day, elected Mr. J. Smith Turner its President, an appointment that must meet with the entire approval of the Association; in Mr. Turner's place as Vice-President, Mr. F. Weiss has been elected.

The Treasurership, vacated by Mr. Parkinson, has been temporarily filled by Mr. Canton, and it will be for you to-day to confirm or cancel, this appointment. Mr. Morton Smale has been selected to fill the position formerly occupied by Mr. Canton.

Mr. T. A. Rogers, a name that is almost a household word in the dental profession, finds it impossible to continue his services as a member of the Representative Board, and another gentleman must be elected in his place.

To all these gentlemen more than our thanks are due, yet that is all we have to give; let the thanks, therefore, be unanimous and hearty, for services such as these gentlemen have rendered their profession are rare indeed.

Dr. STACK: Mr. Chairman and gentlemen, I rise to move the adoption of the report, which I think you will agree with me is an exceedingly satisfactory one. The large increase in the number of members is really in itself sufficiently gratifying, and I

may say here, that I have the name in my pocket of another gentleman not included in the report, who is virtually now a member of the Association. I must deprecate Mr. Smale's very kind allusion to myself in the formation of the Irish branch. I feel that I did the very best I could, but there were other workers in the field who did quite as much, if not more. Mr. Arthur Baker, who is not here, gave the greatest possible help, and Mr. Pearsall, who has attended this meeting at great inconvenience, gave us the greatest help in the matter of smoothing over the initial perils that one experiences, as did also Mr. John O'Duffy. I am happy to say that we appear before you as a united branch with a united purpose.

Mr. GORDON JONES, after making some remarks on the mode of filling up vacancies on the Representative Board, which were ruled to be out of order, seconded the adoption of the report, which was put to the meeting and carried unanimously.

The PRESIDENT: The next question we have to consider is where we shall meet in 1888. Two places have been put forward. A long-standing claim has been made for Birmingham. I believe as long back as the meeting in Edinburgh, Birmingham received a sort of promise that the next meeting should be held there; but since then there has been a very urgent claim from Dublin, and it will be for this meeting to decide which of those places shall have the preference.

Mr. PEARSALL (Dublin): On behalf of the newly-established branch in Ireland, I have come forward here to-day to offer you our heartiest welcome, and to express the hope that you will come to Dublin for the next meeting. It may, perhaps, seem rather presumptuous on our part to come forward so rapidly, but the fact is that we have a great many gentlemen in Dublin who have always held a good social position as dentists, and I think we have opportunities of holding a very successful meeting. We can have the use of good buildings, and I think you may be certain of a hearty welcome. The members of our branch have expressed a great anxiety that this meeting should be held in Dublin, and they are willing to work like one man to make it not only a success socially, but a success professionally. I beg to move that the meeting be held in Dublin next August.

Mr. JAMES CAMERON (Glasgow): I beg to second that.

Mr. A. KIRBY (Bedford) : I am not at all interested in Birmingham, but as the greatest number of members reside in England, I think the meeting should be held in England, and I beg to propose that the next meeting be held in Birmingham.

Mr. PALETHORPE (Birmingham) : I beg to second that. The Birmingham men have sent me to say that they are thoroughly in earnest in offering this invitation, and that if you accept it they will do their very best to give you a hearty welcome. I believe we have a prior claim, having invited you once or twice before, and we sincerely hope that you will give our town the honour.

A discussion ensued in course of which the respective claims of the two cities were set forth by the different speakers. The general impression appeared to be that, while Birmingham had a certain precedence in point of time, the claim of Dublin was (as both Mr. Rees-Price and Mr. Cunningham pointed out) something of a national claim, and therefore superior to that of the city in the Midlands, which represented simply a branch of the Association in England. Moreover, it appeared highly desirable to do anything that would tend to strengthen the newly-formed branch. When the matter was put to the vote, twenty-six voted for Birmingham and twenty-nine for Dublin. It was then agreed that the Association should meet in Dublin on the 23rd, 24th, and 25th of August, 1888.

The PRESIDENT : We now come to the question of President. I am instructed to state that the Representative Board recommend for your adoption the name of Mr. Daniel Corbett, the President of the Irish branch.

Mr. MARTIN SHERWOOD (Oxford) : I beg to propose that Mr. Daniel Corbett be the President-elect of the Association. I have known Mr. Corbett for a great many years, and I was a pupil of his ten or twelve years ago. I know the sterling qualities of the man, and the untiring energy which he has always displayed, and he has been very useful in forming the branch in Dublin. I therefore beg to move that he be appointed President-elect.

Mr. JOHN O'DUFFY (Dublin) : I have very great pleasure in seconding that resolution.

The PRESIDENT : The Representative Board have elected Mr. Canton as Treasurer *pro tem*. Mr. Canton was for some years

Secretary, and it is for you to consider whether you confirm that election.

Mr. S. J. HUTCHINSON : I beg to propose that Mr. Canton be elected Treasurer of the British Dental Association. During the time that he filled the office of Secretary he discharged the duties with thorough efficiency. Perhaps you will permit me to include in this proposition a vote of thanks to the retiring Treasurer. It is a very easy task for me to propose a vote of thanks to Mr. Parkinson, because I have the most intimate acquaintance with him, and every year has added to the esteem with which I first approached him, and I know that that feeling is shared by all the Association. I hope that you will give him your very hearty thanks for his untiring unstinted efforts. He never spared himself with any duty to fill the high responsibility of his office as Treasurer, and in appointing Mr. Canton I ask you to accord your heartfelt thanks to Mr. Parkinson for the service he rendered to the Association.

Mr. SMITH TURNER : I have much pleasure in seconding Mr. Hutchinson's motion that Mr. Canton be elected Treasurer. I have seen some of his ability in that direction already, and I know that in Mr. Canton you will have something like a skilled actuary keeping the accounts. We all know and miss the familiar face of Mr. Parkinson. It seems to me that it reminds some of us that we are getting on, when we have to go through this long array of votes of thanks to men retiring and others taking their places, and it is satisfactory to know that the Association with its age is making progress. Although we shall miss the face of James Parkinson for some time, yet, as Mr. Hutchinson says, we must not allow his name to fade from our memory.

Mr. CANTON returned thanks for his election.

Mr. SMALE : The election of the members of the Representative Board now comes before you, gentlemen, and there are five senior members of the Representative Board for London to go off by rotation, in addition to which my own name and the names of Mr. F. Weiss and Mr. T. A. Rogers come off, which allows us to have eight new members for London. The Board recommend that we should elect as these eight members—Sir Edwin Saunders, Sir John Tomes, Messrs. Storer Bennett,

S. J. Hutchinson, Charles Tomes, Lloyd Williams, Charles West, and Leonard Matheson. These have to be signed by six members of the Association. With regard to the provinces, five members come off—the five first names. Mr. Mahonie, of Sheffield, has died, and Mr. Brownlie has been elected President of his branch, and therefore becomes *ex officio* a member of the Board. The following names have been put forward—Messrs. George Cunningham, Fenn Cole, W. A. Hunt, T. Cooke-Parsons, Blandy, Pike, and W. S. Woodburn.

The PRESIDENT: Gentlemen, I am happy to tell you that the result of the election has been unanimous in favour of those members proposed by the Representative Board. I need not read their names again. There is only one that I should take exception to—one who is disqualified by old age—that is myself. But I am willing to stand for another year, and I will claim your indulgence and will do my duty to the best of my ability. I only state that the number of members elected by the Representative Board are also elected to fill the vacancies among the country members.

Mr. WOODBURN (Glasgow) proposed, and Mr. REES-PRICE seconded, a vote of thanks to the Faculty of Physicians and Surgeons, of Glasgow, for the use of the Faculty Hall, and also to the managers of the Dental Hospital of Glasgow.

Mr. BIGGS: I beg to move a very hearty vote of thanks to the working members of the Representative Board. They have had a very great deal of work to perform throughout the year, and I think it is the duty of the members of this Association to express their appreciation of it by giving them a very hearty vote of thanks at this time.

Mr. ANDREW (Belfast): I beg to second that.

Mr. SMITH TURNER: In the name of the Representative Board I beg to thank you for your vote of thanks for the work we have done, and I presume we may take it also as a vote of confidence in our willingness to serve you. I hope, therefore, that a great deal of the vote of thanks should go to the provincial members, because many of these men come very long distances—some of them rarely missing a Board meeting. We have instances of such a man as Mr. McLeod, of Edinburgh, who comes a long

journey to attend the Representative Board, and we have other members who come from Dublin, and Mr. Waite is continually up with us from Liverpool, and others come very long distances. I think when you consider the sacrifice of time that this involves, you will agree with me in saying that the biggest share of the vote of thanks should go to them, but in the name of the Board I thank you for the way you have expressed your confidence in us.

The President then delivered his valedictory address, as follows :—

GENTLEMEN,—The circling year has again brought round the very agreeable time for the annual re-union of the members of the British Dental Association. Another year has passed, another of those natural and convenient divisions of time, by which, and by the changing seasons contained therein, the short span of human existence is measured. A space of time which is of various value to each of us, and is long or short according to age, temperament, or, above all, as it is full or void of interesting events. As Rosalind says in the charming pastoral play of "As You Like It," "Time travels in divers paces with divers persons ; I will tell you who Time ambles withal, who time trots withal, who time gallops withal, and who he stands still withal." To the young amongst us who are buckling on their armour, and who are jubilant in the first flush of healthy manhood, how insignificant a portion of time does it seem out of the affluence of the years of which they are presumably the heirs ! While to those of us who have more than passed the grand climacteric, a year means the subtraction of a very large amount from the short remainder of life to which we may regard ourselves as having a possible or legitimate claim. Life is here, as it were, viewed through the large and small end of the telescope by those commencing their career and by those approaching its close ; a difference as great and as real as that between the roseate and hopeful anticipations of the future indulged in by the sanguine and the gloomy prognostications of one of pessimistic proclivities. Again, how unspeakably dull and weary are the hours of a tedious convalescence when we are cut off from active participation in the affairs of life, and are forbidden earnest and consecutive thought on any serious subject. In the first onset of sickness the enfeebled patient yields a ready acquiescence in the dicta of the autocrat of the sick room, but with slowly returning strength, his no longer patient spirit rebels against what he regards as the negation of existence. He chafes under the unac-

customed restrictions and limitations of his maimed life, his soul hungers and thirsts for a resumption of his former duties and pursuits, and he burns with an insatiable longing again to enter the arena of his former busy life. Or which of us has not felt during a well-planned and successful holiday, how far away in the past seems the routine life from which he has temporarily escaped; how his days seem to be multiplied and his spirit enlarged by the novel and unwonted aspects of nature, or by the marvels and triumphs of art that on every side charm his enraptured eye? And I feel sure that it will be in accordance with the experience of the members of this Association, or at least of such of them as are qualified to form an opinion from having made the experiment, that occasional absences on foreign travel are of the greatest service to those engaged in the active practice of the profession, by enlarging the intellectual outlook, raising the standard of artistic taste, and thus of counteracting the narrowing and benumbing tendencies of a somewhat barren and engrossing speciality—when, in short, they will be brought to feel the full force of that fine saying of Schiller, "Man grows greater with his greater aims." For however firmly convinced we may feel that the mitigation of pain and the renovation of faulty organization is a useful and highly meritorious pursuit, and not without dignity even when carried out in a right spirit; yet there will be moments when the most enthusiastic practitioner of dentistry must be aware that a life will be wanting in charm which is devoted to the unrelieved monotony of routine practice. I will indulge, then, the hope that since we last met the members of this Association have had opportunity of availing themselves of this much-needed refreshment of mind and body, and that the renewed health and efficiency thus obtained have not only been of advantage to those on whom their skill has been expended, but have resulted in increased comfort, progress, and prosperity to themselves.

But the question of greatest moment to us is, what has been the effect of the past year on our Association? What is the record of its work and to what extent has it fulfilled its purpose? Has it satisfied or fallen short of the expectations of the profession, in whose interests it was established? I cannot help thinking that the report to which we have just listened gives a very satisfactory answer to these questions. This phenomenal year, which has witnessed an unparalleled outburst of patriotism and loyalty; this jubilee year when we are alternately filled with amazement at the

fervour of attachment of all classes and conditions to the personality of the Sovereign, and at the benignity of nature in the unwonted affluence of sunshine with which our beloved fatherland has been favoured ; will be remembered by the members of the Association as having been signalised by the formation of the Irish branch. This gratifying event, the consummation of which is greatly due to the prompt action of Mr. Smith Turner, Vice-Chairman of the Representative Board, whose energy and unselfish devotion to duty have been displayed on many similar occasions, will, I feel sure, be regarded as a matter of sincere congratulation on both sides. To the Association it means an undoubted accession of strength, not only by the augmented number of members, but by the social position of the gentlemen by whom our profession has been so well represented in the sister isle, and for them we hope and believe it will be productive of freer intercourse, warmer friendships, more liberal judgments of each other, greater dignity and prestige, with a higher estimation of the profession on the part of the general and medical public, and all the social gifts and privileges that spring from united action for the common good. Even so does "Man grow greater with his greater aims." I will, then, cherish the hope that the London meeting of 1886-7, both as to the number and importance of the papers read and discussed at its meetings, and the social gatherings with which they were accompanied, will take rank among the many pleasant memories of the Association.

The meeting opened, as you will remember, with an address by our esteemed friend, the President of the Representative Board, which he kindly undertook to deliver in the absence, through the severe, and I regret to add, protracted illness of the then President of the Association, Mr. White, and which was characterized by his usual directness and conciseness of detail on the legislative changes in the Medical Act as affecting our department. This was followed by a lucid exposition of the most approved method of enlisting photography, with its unique advantages of rapidity of execution combined with unerring fidelity of delineation, in the service of biological research by that well-known expert in histology, Mr. Charters White. Mr. Morton Smale then invited our attention to the important subject of dental education in a well-considered and thoughtful paper, which gave rise to an animated and discriminative, but not unfriendly, discussion. Dr. Cunningham followed with an elaborate and valuable paper dealing with

a subject which has hardly yet received the attention to which it is entitled, "Dentistry in its Relation to the State," in which he urged that it was not only the duty but the interest of the War Office and the Admiralty to afford greater facilities, or to make better provision, for the care and preservation of the teeth of our soldiers and sailors. His contention was, if I am not mistaken, that as a matter of public economy, as increasing their health and efficiency, no less than common humanity, it is desirable that a better acquaintance with the principles and practice of dental surgery should be possessed by the medical officers in both services, and that one or more surgeon dentists should be appointed at depôts and garrison towns. This, with a valuable paper on a kindred subject, "Compulsory Attention to the Teeth of School Children, especially of the Army and Navy," by Mr. William McPherson Fisher, appeared to excite, as it deserved, great interest, and gave rise to an exhaustive and animated discussion. And although in the din and turmoil of party strife, and the exigencies of civil and domestic legislation, no immediate action seems likely to be taken in this direction, the agitation of the subject cannot fail to be of the most signal service, and it may be permitted to hope that the day is not far distant when the authors of these valuable papers may witness the realization of their well-considered proposals. At all events they are entitled to the thanks of the members of this Association for the zeal and ability which they have shown in drawing public attention to this important subject. A paper "On the Treatment of Alveolar Abscess," by Mr. Grayston, and another "On Public Appointments in Relation to Dental Surgery," by Mr. Gordon Jones, brought the work of the meeting of 1886-7 to a close.

Such a record is, I think it will be admitted, in itself an ample justification for the existence of the Association, for without the fixed time for the annual meeting, such a gathering of representative men from the old and new world, as was seen at our last meeting, such an interchange of courtesies and renewal of friendships among members of the profession, who might never otherwise be brought into contact, so many edifying discussions and valuable papers on matters of the deepest professional interest, would never have taken place. For, besides providing an audience and an arena, the meeting of the Association furnishes a fixed time for the production of the work, which might otherwise be relegated to that more convenient season which is so disastrous

to prompt and worthy achievement. Then, again, the close and exact thinking, and the niceties of expression which go to the production of a good paper, are an excellent discipline of the mind which cannot but leave a man better and stronger than it found him ; nor is it too much to say that an amount of literary ability and intellectual vigour may be developed under such a stimulus, of which the existence was hardly suspected under former less favouring conditions. So true is it that "Man grows greater with his greater aims."

I confess that I could wish that these golden advantages, and the possession of a Journal excellently conducted—a journal belonging to the Association, always available for the inter-communication of ideas among the members, and thus happily placed above the temptation of seeking popularity by lending itself to personalities or sensational paragraphs—should be regarded as sufficient to endear the Association to the members without expecting it to do the impossible work of stamping out irregular and dishonouring practice. The tares will always be found growing up among the wheat, whatever the soil, and however skilful may be the husbandry. But the good husbandman will direct his energies to the improvement of the latter rather than endanger the good crop by constantly dragging out the tares. I know that it is very discouraging to a man, who conducts his practice in accordance with a high ideal, to stand by and see, if only the apparent or temporary, success of the unscrupulous and mendacious charlatan. But let him take heart of grace when he remembers that in the long run the judgment of the public comes right, and that, in the meantime, he enjoys the approval of his own conscience and the respect of all good men. If all the available resources of the Association could be employed in the prosecution of men of this stamp in London alone, the amount of real good would be infinitesimally small ; some of the delinquents would escape through the uncertain meshes of the best drawn Act and, as happened in a recent case, others might, through some legal technicality, triumphantly demand to be re-instated on the Register from which they had been most properly removed. The two great engines for raising our profession in the estimation of the public, and of the medical profession, are an educated public opinion and organised instruction in dental science, and these are ~~working~~ steadily and surely for this end. If we look back twenty years, we cannot fail to be struck with the real

and substantial advance which has been made, not only in the development and resources of the art, but in the social and educational status of those now entering its ranks. And it is in this direction will be found the true and efficient means of at once freeing it from opprobrium and purging it from the contamination of the unworthy. Prosecutions and punitive and prohibitory proceedings, while they are fraught with irritation to all concerned, and are apt to be regarded by outsiders as a species of persecution, are of little real use or advantage to those on whose behalf they are instituted. Indeed, a prosecution which fails of its object is nothing short of a calamity, not only as being a waste of the funds of the Association, but as defining the limits of the legal enactments, and showing their impotence, and as indicating the direction in which the most stringent clauses may be successfully evaded. As has been said of wars, a victory is only a little less disastrous than a defeat from the enormous sacrifice of life and treasure which are the price at which alone it is gained ; so the cost of even a successful prosecution is out of all proportion to the result. But as time goes on, less and less necessity will arise for such abortive proceedings as the public, with increasing understanding of the subject, will learn to appreciate the educated and honourable practitioner. Let us be patient, and remember how, twenty or thirty years ago, from the insufficient supply of qualified and educated practitioners, the unqualified greatly preponderated, and yet at that discouraging time there were in almost all the great towns, Bath, Cheltenham, Portsmouth, Southampton, Glasgow, Edinburgh, Manchester, Liverpool, Birmingham, &c., members of the profession who occupied distinguished positions, and who stood high in public and professional estimation. Since that time there has grown up a higher estimate of the services of the dental surgeon, and a greater demand for those services, and this having been met by recent legislative enactments and by better educational arrangements, there is no longer any excuse for resort to persons of little education, and still less professional knowledge. And less of that discouragement will in future be felt by the legitimate practitioner, which arises from want of discrimination on the part of the public, and the cry for prosecutions and means for stamping out piratical and discreditable practices, always a fruitless and thankless proceeding, will be less frequently heard.

And now, gentlemen, the moment has arrived when it behoves me to resign the presidency of this Association into the hands of

my successor, lest it should be said of me "superfluous lags the veteran on the stage." You are now very naturally impatient to "welcome the coming, speed the parting guest," so with an expression of sincere thanks for the honourable position which, by your courtesy, I have enjoyed during the past year, I resign the chair to one who will, I am sure, fill it with dignity to himself and with conspicuous advantage to the Association.

The minutes having been read and confirmed,

Dr. JOHN SMITH (Edinburgh) said: When I entered this room I was not aware of the congenial and important duty which awaited me, for I have been asked to propose a vote of thanks to our retiring President, Sir Edwin Saunders, and I know that you will allow that the manner in which he has discharged the duties of the chair, and the admirable and eloquent address with which he has concluded them, has been all that the Association could possibly desire. You are aware also, gentlemen, that since he identified himself with the profession he has been a most liberal benefactor of every scheme which he considered likely to advance the interests of the Association. You are all acquainted with his munificence, his liberality, his urbanity, which he extends to all the members of the profession. He has adorned the profession; he has been an ornament to the profession, inasmuch as he has been the recipient of high honours at the hands of that sovereign whom he so loyally and pathetically alluded to in his address to-day. I have very great pleasure in proposing a cordial vote of thanks to Sir Edwin for his services during the time he has been President, and for the admirable address which he has given us, and his kindness in coming such a long distance as he has done on this occasion.

Mr. CHARLES S. TOMES: I have much pleasure in seconding that motion. Dr. Smith has said all that need be said, by saying that it needed nothing to be said, to commend Sir Edwin Saunders to the very hearty thanks of this meeting. In regard to the conduct of the Journal, as Chairman of the Journal Committee, I may say our lines sometimes lie in stony places, and we can hardly give satisfaction to everybody all round, and it is very satisfactory to us to hear that we have given satisfaction to somebody. I have much pleasure in seconding the motion.

Mr. SMITH TURNER then put the motion to the meeting, and it was cordially agreed to.

The PRESIDENT: I can hardly find words to thank you. This is a

very affecting occasion, because I feel that I may not have many opportunities of meeting the members of this Association. In the course of nature I can hardly hope for it, but I am very glad to hear the flattering terms in which Dr. Smith and Mr. Charles Tomes have been pleased to place the motion before you, and the warm and cordial way in which you have accepted it. I have endeavoured to fulfil my duty, but I feel sure that I have drawn very largely on your forbearance, having on many occasions not been able to attend meetings which I ought to have attended, but which meetings I am quite sure were well conducted without my assistance, and that my assistance was sometimes advantageous from not being tendered.

Sir Edwin Saunders then left the chair, his place being filled by Mr. J. R. BROWNLIE, as President of the Association, who proceeded to deliver his opening address as follows :—

My first duty in assuming the office of President is to thank you most heartily for electing me to this honourable position.

Doubtless I have indulged—as I suppose every member of the Association does—in looking forward to a time when, aided by the degree of deference to which years may lay claim, and by the measure of experience which they should always bring, and with a claim resting upon years of service, I might be called on to preside over the British Dental Association. Patience might have brought about the fulfilment of such hopes, and time would have better fitted for the responsibilities of office. As it is, such expectations have been anticipated, and I esteem the honour none the less that it comes as an expression of your favour, and as a compliment to Glasgow and the west of Scotland.

I do not feel it to be a light matter to be called on to preside over such an Association, and I do feel that I have succeeded to the office under circumstances of more than usual responsibility, under conditions calculated to throw into relief all shortcomings, and to intensify venial faults by force of contrast. It is my lot to follow immediately in succession one of the most eminent members of the profession ; one singularly well qualified by natural gifts and great experience to fill the office of President. No movement fitted to promote the best interests of the profession has lacked his support, while the due provision for the training of students has been to him, and is now, a subject of special care. The London school especially—my *alma mater*—has found in him one of its staunchest friends and most liberal.

supporters. Nor can we be willing to forget in this connection, that with our ex-president the dental profession entered upon a new epoch in its history. For the first time the dignity of knighthood has been conferred upon one of its members, and on professional grounds alone—an honour which must be the more esteemed by him that it carries with it the hearty congratulations of the whole profession.

While I cannot but wish that the office of President had been entrusted to abler hands, I have also indulged in the thought that, apart from all other considerations, I might look upon this call to preside over the British Dental Association as possibly containing more than is immediately apparent. I would fain hope that this is so, for I could then plead a representative character as my title and justification in accepting office to-day.

Two generations of men are represented in the membership of the Association—those who have laboured and those who are reaping the fruits of their labours. The measures by which the profession has attained to its present position are due, no doubt, to a prevalent feeling of dissatisfaction with the previous state of matters.

But however urgent the need, these measures were not formulated and secured without careful consideration and much effort. Till now the Association has profited by the active supervision of its founders, of the men who have wrought hard to break down the spirit of isolation which has proved so great an obstacle, and to establish a bond of union in making the dental licence imperative and also a legal qualification. The task was no light one, and the most complete success in its accomplishment could do no more for its promoters than gain for them the gratitude of those who were to reap the benefit of their exertions. Surely it was incumbent on the first of the later generation, who has been honoured with the call, one who was himself an early student of that pioneer in the work of dental reform, the London Dental School—and especially in view of the retirement of a leader whose genius has contributed so much to our knowledge, and who has laboured so long and so well on behalf of his profession—surely it was incumbent upon one who early profited by such labours, apart from all other considerations, to testify for himself, and for others so placed, that we are neither thankless nor indifferent; that we are prepared, as occasion may require, and to the extent of our ability, to accord to our seniors the satisfaction

of seeing the work they have so happily inaugurated continued by younger, though necessarily less experienced, hands.

Be that as it may, it is now my pleasing duty to welcome the British Dental Association to Glasgow—to a city having associated with it memories which we must all be disposed to cherish, and memories, too, which, save for the lessons they teach, we can now afford to forget. Let me remind you, gentlemen, that you are now on what should be to us classic ground, in a neighbourhood possessing a special interest from having been the scene of the first essay in the life of the man who has been fitly described as the father of the dental profession. In the near neighbourhood John Hunter was born, and in Glasgow he worked as a tradesman during his earlier years, before devoting himself to more congenial work, and in which he so distinguished himself—work which has made his name treasured by posterity, and his writings to be quoted to this day, especially those in which we are more particularly interested. Probably some of you are reminded of other associations connected with Glasgow of a much less pleasing character. That through a period of effort, other prominent citizens, whose names there is no need to hand down in this connection to posterity, did not favourably regard the measures by which it was sought to give effect to our professional aspirations. Some of you may call to mind the additional burden imposed by active hostility on the part of certain of our officials. To one our effort was an attempt at a gigantic trades union. To another it was the thin end of the wedge which was to rend the medical profession into as many sections as there are organs in the body. I trust the diligence displayed by every member of the profession in Glasgow in combating such opposition, was some consolation to those principally engaged in piloting the measure through parliament. If trades-unionism had been our aim, trades-unions are not unlawful, nor need they be hurtful to anybody. To talk of rending the medical profession was rather a curious mode of describing sub-division of labour, since by such sub-division, by concentrating attention to one department, with of course a knowledge of the subject as a whole, the practice of the healing art has been advanced to greater achievements than was otherwise possible.

But the contest is over. For several years past the Dentists Act has been law. Our position has been defined for us, and if we have occasion to complain, it is that we have got so very

much more than we asked for. It was known that there were some two thousand practising dentistry immediately preceding the introduction of the Dentists Act, and parliament in its wisdom made provision for something like three times that number. We got much of what we wanted; we got also that which was neither wanted by us, nor capable of being of use to those who required it. Right had to give way to might, and our good intentions were marred in the execution. But however much the Dentists Act may differ from the Act drafted for the dentists, the progressive spirit of the original measure remains. The common portal to be reached by a compulsory course of study followed by examination remains, and the good we sought to do in our own day becomes the inheritance of those who come after. So much has been secured. An honest register and a specially educated body of practitioners have been bound up with the future, and with the one we will assuredly have the other.

But the benefits of legislation are not all prospective, and short as the period of probation has been, the evidence of its influence is accumulating. It is pleasant in this connection to note the interest taken in us, its youngest relative, by the medical profession, as we see it in the action of its representative institutions—ancient seats of learning interesting themselves in us, medical schools competing for the privilege of educating our youth, and licensing boards formed in connection therewith. The special section of the dental students' curriculum is taken in hand by dental schools and hospitals, in all the larger centres of population all over the country. Thus the licence in dental surgery grows in numbers, and in public appreciation. I know not if it is the company parliament decreed we should keep, which has stimulated so many to take advantage of the *sine curriculo* provisions, but I do know that in this neighbourhood the possessors of the licence in dental surgery have increased from one per cent. within ten years anterior to the passing of the Act, to fifty per cent. within ten years thereafter.

Amongst the more important results of legislation, we must give a very prominent place to the British Dental Association. Formed to give effect to the spirit and the provision of the Dentists Act, it is yearly drawing closer professional ties. It is bringing together those who might not otherwise have met, and under conditions which cannot fail to promote the art and the interests of the dentist. These annual gatherings afford an opportunity for friendly

intercourse and for the interchange of ideas. As co-workers in the cause of humanity, improved processes and new inventions are ceasing to be made to do secret service on behalf of their promoters ; if they are deemed capable of standing the test of professional eyes and criticism, they are used rather to promote the reputation of their possessor amongst his fellows, or at the least to add further contributions to the long list of dental curiosities of invention. The programme of to-day, as of former years, bears witness to the Association's disposition to be of service to the community at large ; while its Benevolent Fund suggests the possession of some measure of that virtue which is said to begin at home. By this fund the unfortunate, the widow and the orphan are cared for, the young are educated, and the helpless are put in the way of maintaining themselves. By this voluntary organisation, contributors may share in a good work with the knowledge that their contributions will be wholly devoted to the purpose for which they were given. The central idea of the British Dental Association is political, but its sympathies are as wide as the profession itself, and it is much to be desired that its connections with the profession will soon be equally widespread, and that the opportunity afforded by the formation of additional branches will be taken advantage of to the fullest extent.

If I were to make it appear that we have as yet great occasion to rest and be thankful, I should misrepresent the situation. A first attempt at legislation must necessarily leave room for improvement. Already, certain alterations have been effected with advantage, and it may be expected that from time to time opportunities will present themselves for further adjustment of the provisions of the Act. Such opportunities are not to be neglected, but is there no danger of relying to too great an extent upon such help—of laying too much stress upon legislative interference ? Now, more than ever, men are invited to look to Parliamentary interference as the means of removing grievances, and ameliorating the conditions under which we live, and dentists have not been exempt from conceiving great expectations from an Act of Parliament. An Act has been obtained, yet it does not appear to have given entire satisfaction. There are those who are not wholly pleased with it, and who allow themselves occasionally to say hard things concerning it. We are not so much interested in such fault-finding as in ascertaining that there is no real occasion for it. Such an enactment must provide for certain

pains and penalties, and it is not difficult to account for the prominence which such provisions have attained to in the minds of many, but it is to slander this measure to represent it as mainly an Act for the repression of dishonest procedure, not otherwise enumerated in the statute book. Penal clauses were necessary, and the expectation founded on them of at once sweeping from within our borders every cause of offence was doubtless an attractive feature to many minds. The very moderate use which it has been thought fit to make of the powers conferred by these clauses has consequently proved a source of disappointment. But where is the occasion for indulging such feelings? Laws for the repression and the punishment of crime have existed from time immemorial. They have been enforced with all the resources and authority of government, but crime is not yet extinguished. When petty larceny was made a capital crime, the extreme penalty of the law failed in years gone by to put an end to it. Need we then hesitate to own that the Dentists Act, with the support of a purely voluntary Association, has not sufficed in less than ten years to extinguish the evils of which we justly complain? Is it reasonable to speak of failure because we have found, as others have found repeatedly in similar connection, that, allied to a disposition to evade the law, a degree of invention, a measure of ability may exist which, properly directed, would have sufficed to raise the offenders from the level of social parasites to that of reputable members of the profession, and useful members of society. Such provisions as the penal clauses of the Dentists Act can be said to fail only in the sense in which all such legislation must fail. There are evils which are presently capable of cure, and there are those which, for the present, it may be expedient to put up with—proceedings of which we cannot approve, but concerning which we may adopt the advice lately tendered by an eminent statesman to his adherents, and wink hard, as even older and stronger associations have at times seen fit to do.

The degree of moderation with which the penal clauses have been enforced is to the credit of this Association, and the convictions following on complaint have justified its interference and set it free from any suspicion of oppression. The more flagrant offenders have learnt that such provisions can be used, and that there is no intention of letting them become a dead letter. Typical cases have only so far been selected. Valuable precedents have been established, and good must result from the convictions

in court, and the exposure of the various systems followed by pretenders. We have, no doubt, assumed a responsibility in this matter, but as imposture can only exist where there is lack of information, not to say indifference, on the part of a considerable section of the community, this Association must be credited with a due discharge of its duty, as much in setting up such landmarks as will suffice for public information and guidance, as in the punishment of those who are breaking the laws which Parliament has thought good to pass for the public well-being. On this point we make no uncertain sound, for no man who is entitled to call himself "dentist" will hesitate to do so. The term is a legal title, the property of registered practitioners only. Any departure from it is wholly unnecessary, and while it might be supposed that another term would indicate only a degree of originality, it is much more probable that such other term has been assumed because the employer of it has neither the right to seek for public confidence, nor any part in a profession of which he dare not even assume the name.

We may not lose sight yet, in reviewing the results of legislation, of the nature and extent of the task imposed upon those who undertook to promote it—a perfect chaos to be reduced to order ; a *status* to be formed ; education to be provided for, and a reasonable security obtained that the sacrifices thus entailed should not be thrown away. Various plans were proposed, and most of us can recall some of the proposals by which it was sought to assign a definite position to our specialty. The difficulty lay in giving due effect to the necessity for both a surgical and a mechanical training. No existing qualification could be said to meet the want, and to add a surgeon's training in its entirety to any reasonable period of apprenticeship could not be thought of. But between these two a compromise was effected. By lopping off that which was not essential on both sides a curriculum remained adapted to the wants of the dental student, and analogous in point of time and previous preparation to that to be observed by the student of general surgery. To certify to the due observance of prescribed conditions and to a certain degree of attainment therein, as proved by examination, the licence in dental surgery was called into existence, and has become the minimum of preparation to which the law permits the title "dentist." To the great body of the men now devoting themselves to dentistry, the L.D.S. must form their sole claim for admission to the Dentists'

Register, and to them especially we must look to sustain its reputation. It rests with them to prove that it is a fair and reasonable interpretation of the necessities of the case—that apart from any other qualification, it is not merely sufficient for a useful and successful career, but that it may by itself be associated with the very highest attainments in the practice of our art.

To those who require more the way is open, and they have every encouragement to avail themselves to the full extent of their opportunity. He will best fulfil his mission who brings to the discharge of his duty the most extensive and varied information and hands drilled to give the utmost effect to his intentions in the discharge of all such services as he may be called on to render. To such a one the acquisition of any available title is a work of time and effort. Of medical titles at home and dental titles abroad there is no lack, and so long as they are legitimately acquired and used the additional information and experience they represent must prove a gain to their possessor and a credit to the profession of which he is a member. But the medallion has its obverse—the most coveted distinctions have been imitated. We have not now to complain so much of absolutely base metal as of the extent to which it is alloyed. Surely two out of so many dental diplomas granted in America is too small a proportion to be found deserving a place on our Dentists' Register. Probably we ought now to congratulate ourselves that the issue of really counterfeit diplomas is at an end and that in this respect some improvement has been effected. It is over a dozen years since we had here in Glasgow an agency for the sale of bogus diplomas, and at that time I was favoured with a visit by the accredited agent of one of these so-called American colleges, having full authority to examine *in absentia*, and to grant any or as many titles as might be wanted. This man's agency extended to granting the degree of doctor in divinity, medicine, dentistry and some other professions, and the charge was moderate considering the outlay usually entailed in the acquisition of such honours. So flagrant an abuse could not long survive. This "College" was suppressed, and it does not appear that such honours are now to be had on the like easy terms. We have something still, however, to hope for at the hands of our transatlantic brethren. We are still left to contend with the varying value of American dental diplomas, nor can we be content that the title conferred should acquire by crossing the ocean a fictitious value, that it should have one meaning in America and

a different meaning here. The situation is no doubt a difficult one. We may be unable to realise adequately the difficulty of finding a remedy, but while we suffer under it, we are interested, and must welcome every indication that the subject will yet receive the attention it merits. Surely the country which has done so much to enhance the usefulness and extend the resources of our profession, is capable of producing a Tomes—aye, and a Smith-Turner too; the ability to plan and the energy to carry through such measures as will gain for American dental qualifications a more satisfactory *status*, and fit them one and all to take their place on a footing with our own licence in dental surgery.

In our neighbours' affairs we may claim to be permitted a neighbourly interest. We gladly recognise all that we find to be good, and where we have occasion to feel aggrieved we may be allowed to hint at the possibility of improvement. Our *raison d'être*, however, lies nearer home, and the British Dental Association is still in its youth. It has assumed a most comprehensive name, and it has yet to make good its claim to it. Its name includes, as the legitimate field of the Association's operations, the whole of an empire on which the sun never sets. Are we to understand the term "British" as employed in its limited, or in its widest sense? To the Great Britain with which we are familiar, or the Greater Britain which lies beyond? From time to time we are reminded of this larger field, by the appearance of names on the rolls of our dental schools which were never invented in these isles. In process of time their owners pass from us, in company, it may be, with others who elect to try their fortunes in some one or other of our colonial possessions. Are we to let these men go as if we had no further interests in common? An inhospitable climate sends a Coleman abroad in search of the health denied to him here, and the warm interest he displayed in the affairs of the Association terminates and is lost to it. We have not yet formed colonial connections.

Our sphere of action has been limited, and we may still increase within this limited sphere. But not until we have taken possession of this wider area, till this Association is represented by branches wherever dentists are in numbers sufficient to combine for the purpose, can we claim to be in the fullest acceptation of the term, the "British" Dental Association.

Mr. BROWNE MASON (Exeter): I rise to propose a very hearty vote of thanks for the very able address that we have just heard

from our new President—one that we must all have listened to with very great pleasure. He has gone over a very wide range, and his address has been full of matters for deep thought. I propose a hearty vote of thanks to him for his Presidential address to-day.

The motion was seconded by Mr. WILSON, and put to the meeting by Sir EDWIN SAUNDERS, and heartily agreed to.

Annual Meeting of the Benevolent Fund.

Friday, August 19th.

Mr. J. R. BROWNLIE (President of the Association) in the chair.

Sir EDWIN SAUNDERS, in the absence of Mr. Woodhouse, read the report of the funds as follows :

GENTLEMEN,—As it is quite out of my power to be present at your meeting, I am obliged to make my statement of the financial condition of the Benevolent Fund of the British Dental Association in writing.

I will first state our circumstances, and then point out the special subjects of interest in the report. Our income during the year, ending June 30th, was £369 6s. 4d. ; of this £81 5s. 4d. was from donations and £288 1s. from subscriptions. Added to this we had £152 8s. 11d. in the Bank at the commencement of the year, making a grand total of £521 15s. 3d. Of this sum we were obliged by our laws to invest £50, that amount being made up of donations of £5 and upwards ; besides this, we have invested another £50 for which there was no immediate need, making together £100. We have expended £180 11s. 10d. in benevolent allowances, being £31 more than we disbursed in this way last year. Our printing and stationery account amounts to £1 5s. 6d., and postage and miscellaneous expenses to £4 9s. 6d.

We have £210 13s. 4d. in the Bank and £24 15s. 1d. in hand. Our income last year was £91 13s. 5d. greater than in the previous year, the amounts being £277 12s. 11d. to June 30th, 1886, and £369 6s. 4d. to the same date this year.

Our invested capital is now £863 5s., which last year yielded an income of £20 4s. It is very satisfactory to see this, as it is an assurance of the stability of the Fund, but the Committee are quite prepared, instead of investing, to expend all the income they are at liberty to part with, in benevolent allowances, should suitable cases arise, but they always feel that they must have something to fall back upon until the year is ended, for any urgent cases that may come before them.

BENEVOLENT FUND OF THE BRITISH DENTAL ASSOCIATION.

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BALANCE SHEET AS AT JUNE 30TH, 1887.

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Donations	£81	5	4
Subscriptions—1885	...	£6 6 0		
" 1886	...	101 0 0		
" 1887	...	160 11 0		
		267 17 0		
Interest on Investments	20 4 0	
Bank of England, at July 1st, 1886	...	...	148 4 11	
Cash in hands of Secretary, at June 30th,				
1886	...	...	4 4 0	
			£521 15 3	

5th August, 1887.—We have examined the Books of the Benevolent Fund of the British Dental Association with the Vouchers, and hereby certify the above Balance Sheet to be correct.

(Signed)

W. F. FORSYTH,

Auditors.

ASHLEY GIBBINGS,

The details of the expenditure I will leave to the Hon. Secretary to give, as he is brought more immediately into contact with the individuals than I am, and on him devolves the trouble and difficulty of finding out if they are deserving of the help of the Fund—no light or pleasant work, you may be assured. Suffice it for me to say that we have been able to continue the aid to those we had already helped, and have added others to our list. A statement of the financial progress of the Benevolent Fund since its commencement has been kindly drawn up by Mr. George Tawse, who has from the first acted as Honorary Accountant for it. This will be found elsewhere, and shows the substantial growth it has made, as the Report of the Honorary Secretary illustrates the extended benefits it is conferring on our necessitous brethren.

I am sure it must be most satisfactory to the subscribers to the Fund to see how very small a sum is necessary to carry on its operations, only £5 15s being the total expenditure for the year for printing, stationery, and postage. I trust that in other respects the report may have your approval.

A. WOODHOUSE,
Treasurer.

In the unavoidable absence of Mr. George Parkinson, Mr. S. J. HUTCHINSON read the Committee's report as follows :

Your committee beg to submit to the contributors of the Benevolent Fund of the British Dental Association their fourth annual report.

The Honorary Treasurer's financial statement, duly examined, and certified by the auditors, extends from the foundation of the Fund in 1883, to the end of the present financial year, June 30th, 1887. Sir John Tomes having resigned his Presidency of the Representative Board, is succeeded by Mr. Smith Turner as ex-officio Chairman.

The general business brought before your Committee during this period has been on the increase, comparatively with past years. The number of children being educated at the expense of the Fund are eleven ; these children are placed at good, but inexpensive schools, in various parts of the country. Two boys whose mothers were left totally unprovided for are placed at a school at Dover, where they are receiving a good education, and are well and happy. Two children, members of one family whose mother was left in a very destitute condition, are placed at a good school at Herne Bay, and were it not for the existence of this Fund their education would have been entirely neglected ; the mother also has received very material help, and is now, with the aid of an elder daughter, making a very fair living by dress making. The father of this family was during his life time a most respectable practitioner, but being cut off very suddenly, he was quite unable to make any preparation for the support of his family, and when their case was first brought before your Committee they were on the verge of starvation.

Two children are being educated at schools in Gloucestershire, the mother thereby being able to make her small annuity cover her expenses, but if these children had not been educated for her, they would have been quite neglected and the mother probably unable to make her way in the world.

One child is being educated at Brighton, one at Windsor, two at Louth, one at Blackheath, one at Sunderland, in all these cases children are being fitted for a useful life and we are materially lessening the pinch of poverty at home.

Seven widows are receiving in several cases weekly allowances, or are being otherwise substantially helped in their struggle for existence.

In one case of a widow, she has had a "Singer Sewing Machine" (the property of the Benevolent Fund) lent her, by the help of which she is able to make a living, and for which she is most thankful ; she was in an utterly destitute state when your Committee first heard of her. All the other widow recipients of your charity are most grateful for the help extended to them, as their letters and personal thanks constantly testify.

Three dentists who have entirely broken down from ill health and other causes, have, after the most careful and searching investigation, been greatly helped to tide over pressing difficulties, and aided a good deal to future prosperity. In one case of a dentist, your Committee paid arrears of rent, and advanced money to redeem tools and instruments, and with the addition of a small weekly allowance entirely set him on his legs again. In another case, your Committee are endeavouring to help a dentist who, by some unfortunate bill of sale, has entirely lost every thing he had ; he is a most deserving and respectable person, a non-advertiser, but has been almost ruined by unscrupulous and advertising competitors ; this case is now under the consideration of your Committee. The foregoing are fair samples of the cases brought annually before your Committee.

Had the amount of our funds permitted, your Committee could have in many cases more substantially come to the rescue, but they have been obliged to use great economy and care in dealing with them.

Your Committee would earnestly appeal to the profession for more support, especially by annual subscriptions and donations, as the amount of suffering amongst our poorer brethren is only known in most cases to themselves and those who investigate their positions, and are often heartrending and very sad, generally through no fault of their own, but from a combination of circumstances over which they have no control and which, by a little timely aid, can be tided over or removed.

Your Committee would allude with great satisfaction to a donation from the Western Counties Branch, in accordance with a suggestion of Mr. Browne-Mason (of Exeter) its president last year. This is in

addition to individual subscriptions and is a most welcome innovation and an example your Committee trust will be followed.

In accordance with Rule XX., this annual report is now offered for your approval and acceptance, and a list of contributors has been prepared and is now open to your inspection prior to publication.

In conclusion, the best thanks of the Association are due to the auditors, Messrs. Forsyth and Ashley Gibbings, for their kindness in again auditing the accounts, and also to Mr. Tawse for his generosity and kindness in again gratuitously preparing the balance sheet, which is now presented to you for your approval.

The PRESIDENT: From what we know of our Treasurer and Secretary of the Benevolent Fund, I am sure you will all agree with me in saying it must be a matter of great regret that they are not able to be present to-day, and that no one must think for a moment that it is through any lack of interest in the work that they are not with us. Both the reports are of the most gratifying nature, and I am sure will meet with your approval. The work has been carried on in the most satisfactory manner.

Mr. BROWNE-MASON (Exeter): I have very great pleasure in rising to second the motion for the adoption of the report. I think from what we have heard that it is in every way exceedingly satisfactory, and I take this opportunity of handing over the cheque of ten guineas that my branch commissioned me to bear to you to-day. I think it may be pleasant to hear that at our Annual Dinner of the Western Branch one of the President's guests, an outsider, gave me a cheque for one guinea, which I also hand over to the Treasurer.

Mr. HUTCHINSON: I have now to announce that in accordance with the bye-laws of the Society, one of which I will read bearing upon the case, Messrs. Waite and Dennant retire as members of the Committee of Management. I think Mr. Dennant was one of the inaugurators of this fund, and he has taken the most complete interest in it, and has come up from Brighton constantly to attend our meetings, and has discharged his duties as Vice-Chairman in the absence of Sir John Tomes with great interest, and I think we owe him a debt of gratitude. Dr. Waite has been also very kind in coming to our meetings, whenever there have been meetings of the Representative Board, and I am sure you will be sorry, as we are, to lose the help of his wise counsel and his good judgment. The bye-law to which I call your attention is as follows:—"The affairs of the fund shall be conducted by a Committee of Management, consisting of ten members, and composed as follows: The President for the time being of the Representative Board of the British Dental Association (if he be eligible as a contributor to the fund), the three Trustees and six contributors to the fund of a sufficient sum each to entitle them to vote being also members of the British Dental Association, two of whom shall be members of the Representative Board of the Association.

"These last-mentioned six members may serve for three years from the date of inauguration of the fund, at the expiration of which period *one-third* of the members shall retire according to seniority of election. After the third year *one-third* of the members shall retire annually according to seniority of election, and shall not be eligible for re-election until the expiration of one year."

On the proposal of Mr. MORTON SMALE Mr. Fenn Cole and Mr. Browne-Mason were elected to fill the vacancies caused by the retirement of Messrs. Dennant and Waite.

In reply to an enquiry whether the fund were confined to the relief of members of the Association, Mr. HUTCHINSON stated that it was available for all registered practitioners, their wives and children. He also announced subscriptions of one guinea each from Mr. Martin Sherwood, Mr. G. W. Yates, Mr. John C. Story, Mr. G. Campion, and of a half guinea from Mr. Payling. Mr. Morton Smale had given a donation of ten guineas, accompanying it with the suggestion of a Jubilee collection for the fund.* In connection with this suggestion, Mr. Hutchinson called attention to the fact that the invested funds were £863, and urged the desirability of raising them to £1,000.

Dr. STACK offered ten guineas provided twelve other gentlemen would give the same, and Sir Edwin Saunders expressed his readiness to join Dr. Stack. Mr. Shillinglaw gave a Jubilee donation of a guinea.

A vote of thanks to the officers of the Fund was proposed by Mr. WILSON and seconded by Mr. BROWNE-MASON, and carried unanimously.

Thanks were likewise voted to Messrs. Forsyth and Ashley Gibbings who had acted as auditors.

Mr. RICHARD ROGERS proposed, and Mr. BRUNTON seconded, a vote of thanks to the Chairman, which the President briefly acknowledged.

The Dinner.

The annual dinner of the Association was held on Friday evening, 19th August, in the Grand Hotel, Charing Cross. Mr. J. R. Brownlie, President of the Association, occupied the chair, and Mr. J. S. Woodburn and Mr. Rees Price officiated as croupiers. Among those present on the platform were the Lord Provost of Glasgow Sir James King, Sir Edwin Saunders, Mr. Charles Tomes, Mr. Morton Smale, Mr. James Smith Turner, Dr. James Morton (President of the Faculty

* A complete list of the Jubilee donations and subscriptions will be found at page 593.

of Physicians and Surgeons), Dr. Barr, Mr. Mechan, Mr. Duncan. Letters of regret were received from Principal Caird, Dr. Gairdner, Professor of Medicine, Glasgow University, Sir G. H. B. Macleod, Professor of Surgery, Drs. Dongall, Kelly, Buchanan, Stoddart, &c. There was a large representation of the members of the Association.

After the loyal toasts had been heartily responded to, the Chairman proposed the "Army, Navy and Reserve Forces," Mr. RICHARD ROGERS, of Cheltenham, responding.

Dr. ARTHUR MECHAN proposed the "British Dental Association," and said it had been his good fortune to have been almost daily associated with members of the British Dental Association, and for this reason he was certain no one would propose their health with more heartiness and goodwill than himself. He then said:—On reading the newspaper this morning I came across the report of your meeting of yesterday, in which there was a remark made by Mr. Brownlie to the effect that the medical profession seemed well disposed towards its youngest relative. I do not think that you should take the position that you are the youngest relation. I fail to see why you should not be incorporated with the British Medical Association. It is almost impossible for many of you to imagine the amount of ignorance many medical men have regarding dental surgery, and *vice versa*. I from my own experience know a number in Glasgow who think dentistry consists merely in extracting a tooth with a key, or in curing toothache with carbolic, a little chloroform, or a sixpenny packet of toothache specific. That is the idea of many medical men at the present time. Of course there are many men holding dental and surgical degrees, and I therefore say there should be a section of dental surgery incorporated with the British Medical Association. Those men who are anxious to learn on either side could do so, and I am sure if you try the British Medical Association will assist you. I shall say no more, as we have plenty of speakers in view, but ask you to drink the health of the British Dental Association.

In reply, Mr. MORTON SMALE said, I have to thank you sincerely for the kind expressions which have been manifested towards this Association. In my short career as Secretary of your Association I have come across two distinct classes of men, the unselfish and the selfish. Fortunately for us in this Association we number a very large share of unselfish men—men to whom self-sacrifice is a daily word. I might say more than this even, that it goes as far as self-renunciation, men who think only how best they can promote the interests of their profession and help their weaker brethren. On the other hand there are a few—I am glad to say there are very few—of the selfish order, who have joined this Association for selfish ends, simply in order that they may promote their own

personal interests. I must congratulate the Association to-day on the success which it has attained, and the fact that all the local papers have given us accounts of our meetings which must gratify the most sanguine, and do much to educate the public. On the self-sacrificing side we have a noble example in our retiring President of the Representative Board, Sir John Tomes. Let us follow his example, and when it becomes our turn to resign, may it be said of us as it can be said of him : " he has fought a good fight, he has kept the faith," and henceforth there is laid up for him in the heart of every dentist in the world an amount of affection and respect that I cannot find words to express. But, in addition to these, we also have to deal with critics who are never satisfied that anything is being done right. The President of one of our branches has thought fit to criticise the whole history of dental reform. He has said that we ought to have a college of our own, that we ought to have a council of our own, and that we ought to be a separate profession. After mature consideration, I believe that if there were two grand points in the whole dental reform they would be the granting the L.D.S. by the colleges of surgeons throughout Great Britain, and the placing of the Dental Register into the hands of the Medical Council. I do not believe, gentlemen, there is a firmer supporter of the L.D.S. diploma in the room than I am. If I had my way no man should practise in this country if he did not possess the L.D.S. But, gentlemen, I should be indeed sorry to see the time we were separated from the grand science, the greatest of all sciences, —the science of surgery. I think we may be proud of our connection with the Medical Council. Why should not we, if we are part of the medical profession, be governed by the same body that governs the rest? You say we do not possess a representative on the Council ; that is true, but neither a few years ago did the gynecologist, the ophthalmologist, the aurist, &c., and so our turn may come soon enough. I thank you in the name of the British Dental Association for the very kind way in which you have drank our health.

"The Dental Benevolent Fund" was then proposed by Mr. ANDREW WILSON, who said : Mr. President and gentlemen, those of us who attended the meeting this morning must have been agreeably surprised at what they learned ; in the first place the nature of the expenditure, and the assistance given to the recipients ; secondly, the extremely small amount of expenditure involved in the administration of the funds, which was certainly something astonishing ; and in the last place there is a steady increase in the funded capital. The name that I have to associate with this toast is that of a gentleman who will be able to tell you a great deal more about the aims and general objects of the fund than I can, so that I will merely propose the "Benevolent Fund of the British Dental Association," coupled with the name of Mr. S. J. Hutchinson.

In reply, Mr. S. J. HUTCHINSON said the British Dental Association was founded with three objects : first, to provide for the interests of the profession under an Act of Parliament ; secondly, to carry on a journal which shall help in the good work, and thirdly to form a Dental Benevolent Fund. The funds are established not for a purely selfish motive ; it is not intended to benefit ourselves entirely ; the recipient shall be either a registered dentist or the widow or orphan of a registered dentist ; and the chief recommendation is that the case shall be deserving. Another great reason for the existence of this Fund is the more business-like manner in which it is able to deal with cases of relief ; formerly they had to send out a round robin at the expense of a large amount of time and of money in aid of one particular case. But, now, as these cases arise they are referred to the Central Committee and they receive help at once. The word "Benevolent" is well chosen. It is pure benevolence. We do not deal out charity ; we help people to help themselves ; we have on our books at the present time receiving material aid seven widows, and three others we help not only by small allowances, but also by giving them the means by which they can help themselves. For example, one widow has been provided with a sewing machine and she can procure sewing work. Besides this we have eleven children at school ; we give the children a good, sound, honest English education, and in time they will be able to earn their daily bread, instead of being paupers. We have also three dental practitioners who have broken down in health ; we have helped them, not by pauperising them, but by assisting them to the means of earning a livelihood for themselves. There is one other matter to which I want to refer ; we have an invested capital of £863, the amount of money required to make this up to £1000 is £137 ; now, I want you, gentlemen, to-night, to help us to raise this fund and enable us to help the poor, the suffering, the widow, the fatherless, and the orphan. I shall be still more pleased if you give us annual subscriptions, which can be extended to deserving cases as they come in. Many of those present have given largely and nobly to this fund, and it is hardly fair to ask them to give again.

I must be allowed to refer to those gentlemen who have so nobly responded to my appeal for a special donation, to mark this special year of Her Majesty's reign to raise the sum of our capital to £1,000. I had a contribution this morning, started by our honorary secretary giving us ten guineas in addition to his former subscription. This was rapidly followed by Professor Stack promising another ten guineas, in addition to ten guineas he has already given. Sir Edwin Saunders added a further ten guineas. In addition to this there was a further sum of ten guineas, brought to us by Mr. Browne-Mason as a contribution for the Western Counties Branch of the British Dental Association.

At this stage Mr. COXON promised, on behalf of the Eastern Counties, to subscribe the sum of ten guineas towards the fund.

The CHAIRMAN also intimated that the Western Branch would contribute a further sum of ten guineas.

Professor STACK said the idea of raising the Dental Benevolent Fund to £1,000 did not of necessity involve that each contributor should offer ten guineas. His subscription was offered as an inducement to all others, whether large or small, and there is no objection to a man subscribing one, two, three, four, five, fifty or a hundred guineas.

In proposing the "Faculty of Physicians and Surgeons," Sir EDWIN SAUNDERS said: Mr. President, my Lord Provost and gentlemen, the toast which I have the honour to propose is the "Faculty of Physicians and Surgeons in this City." You, sir, have set us the example—the good example—of short speeches, and I think in this case a long speech is not necessary to commend this toast to this large assembly. But, there are two other reasons why there should not be a long speech. One is that from the point of view of the Association, it is only necessary to express our gratitude to the authorities for placing their hall at our disposal for our meetings. And the second reason is that I am in the unfortunate position of knowing very little about Glasgow or its notabilities, medical or otherwise. One of the obvious advantages of an association, such as that which is now celebrating within these walls its second visit to Scotland, is that by its migratory character it enriches our knowledge of places and of men. By the organising skill of the President and the local Secretary, the members of the Association have unusual facilities for seeing all that is worth seeing in the place in which the meetings of the Association are held, in a way which could not fall to the lot of ourselves individually. We must all entertain a lively recollection of the brilliant reception which we met with on our first visit to Scotland—the reception that was accorded to us by the City of Edinburgh. I do not forget that that was due in a great degree to the happy and exceptional circumstance that our President at the same time held the high position of President of the Royal College of Surgeons. Everything that was interesting in the way of memorials and of a venerable past we had access to, and our admiration was called forth to witness some of the triumphs of engineering skill in the neighbourhood of Edinburgh; and now, in this busy, industrious and enterprising community, this city of well-planned streets, of classic Greek productions and architectural monuments, this prosperous western capital of Scotland, we meet at every turn with some new beauty in the way of architecture, in the way of taste combined with wealth. I am sorry that my knowledge of the medical profession in the city, is so very limited, owing to my few opportunities of visiting that city and

I am unable to do more than again express the thanks of the Association for the kindness done to us by the Faculty of Physicians and Surgeons, and I couple with this toast the name of Dr. Morton, the President.

Dr. JAMES MORTON in reply said : Mr. President and gentlemen, I have much pleasure in acknowledging the very kind notice that has been taken of the Faculty of Physicians and Surgeons of Glasgow by Sir Edwin Saunders. The Faculty have endeavoured for many years to display a liberal spirit in regard to matters medical, and I may tell you this, that they have always been ready to allow their premises to be used by those who are pursuing science. The Faculty of Physicians and Surgeons would be glad to welcome the British Dental Association to their walls again, and let me hope this will not be the last visit of the British Dental Association. We cannot expect to see you every year, we know very well that other cities and large towns are competing for the honour of meeting the British Dental Association, but in the course of time we may perhaps have another visit when we shall be glad to meet you in similar circumstances to the present.

At this stage the CHAIRMAN said he had great pleasure in saying that the Benevolent Fund was growing apace, and that they were steadily adding by less conspicuous contributions to the sum which was required and asked for by the Dental Benevolent Fund, and he informed them that their esteemed chief magistrate, Sir James King, had been so interested in what had been said concerning their proceedings in that respect, that he had taken a part in the excellent procedure and subscribed two guineas to the fund.

Mr. PEARSALL, of Dublin, next proposed the "Odonto-Chirurgical and Odontological Societies," and said : The toast I have got to speak to has nothing to do with dental reform. It has to do with questions, not political but scientific, and I cannot speak too highly when I say the Odonto-Chirurgical and Odontological Societies have done yeoman's work in our cause. Societies like these that meet for the common welfare of men who are deeply interested in the success and advancement of their profession, do a wonderful amount of good. They bring together those who, from their positions and from other causes, do not easily meet, and I think nothing could be better for any profession than for its practitioners to meet together and take friendly counsel as to the best way to pursue their interests. All professions seem to me to observe this privilege, and from the history of these societies in the past let us hope they will be more brilliant in the future. They have done splendid service in forwarding this Association in Scotland, and nothing could exceed the work the Odonto-Chirurgical and Odontological Societies, for which I have the honour to propose this toast, have done in making dental surgery a

profession and not a trade. The speaker then alluded to the successful meeting of the British Medical Association in Dublin, and expressed a hope that the dental body would be soon represented in a section of its own.

Mr. CHAS. TOMES having replied for the Odontological, and Mr. W. HERBERT WILLIAMSON for the Odonto-Chirurgical Society, Mr. HUTCHINSON read the list of those gentlemen who had subscribed towards the Benevolent Fund in the course of the evening.

In proposing "The Visitors," Mr. JAMES SMITH TURNER said : We are frequently asked what has the British Dental Association done ; what is the good of it ? Well, I would say to-night that we have been instrumental in bringing this gathering together in the city of Glasgow. Further, that we have enabled the dental profession, as represented by the British Dental Association, to offer its hospitalities to the leading citizen of this great city and also to members of the other professions who have come to meet us here to night, so that we may pour out our grievances to them, and tell them what we have been doing, and what we are going to do ; and it is by measures such as these that we hope to raise our profession and alter the esteem in which it has been held by the public, and to remove the stigma that has long attached to the calling of dentist. We have had many difficulties to contend with, and many discouragements, but we have come through it all to the position which we now occupy, and the position was by virtue of an Act of Parliament secured about nine years ago ; we shall persevere to educate our students while educating ourselves, and endeavouring to gain the esteem of the medical profession. They say that imitation is the sincerest form of flattery. I think the medical profession may feel that we, whether we have flattered them or not, have tried to imitate them in the course of our education. We have made our curriculum as difficult as their own ; we have made the time required by the dental student before he can obtain his degree a year longer than the curriculum for the general practitioner. I appeal to the medical profession to help us in our efforts. The gentlemen who honour us with their presence on these occasions are already in our favour, but there are a number of medical men who still hold the notion that anything is good enough for dentists, and anything is good enough for dentistry. To illustrate what I say I may tell you that only last week a notorious practitioner in London was able to issue a certificate with a testimonial from a medical man of considerable eminence. While such a spirit is pursued by any member of the medical profession, we are dreadfully handicapped, and I appeal to those gentlemen who have joined us to-night to set their faces against any member of their profession doing such a thing. Our Register is now interspersed with a large number of names which should not be there, and unless we have the countenance of the medical profession in helping us, it will take longer to reduce

the number of such names than it would otherwise do. With regard to our meeting in this great city, I think we are greatly indebted to the members of the Western Branch for bringing us here to-night, and now in the name of the British Dental Association, and in the name of the Western Branch, I thank those gentlemen for coming here, and I ask you to drink their health, associated with the name of the leading representative of this city, a proud position for any man to occupy, a position which can never be attained without ability—I mean Sir James King, Lord Provost of the city of Glasgow.

The LORD PROVOST replying, said: Mr. Chairman, Mr. Smith Turner, croupiers and gentlemen, on the part of the other visitors as well as myself, I beg to thank you for the hospitality which you have shown us on this occasion. I can assure you that, speaking for myself, and feeling that I may speak for those who are visitors as well, you have afforded us a most pleasant and interesting evening. I am glad you have called us visitors and not strangers, because although I am very much of a stranger to the importance and aims of the British Dental Association, I am by no means a stranger to the unselfish work which has been done by the leading members of the dental profession in Glasgow. I had the honour of presiding at the annual meeting of the Dental Hospital, and I learned there how much was done without reward among the poor. I think it shows that the profession of dentistry is well worthy of being incorporated with the medical profession, seeing that it carries out one of its most characteristic features, that of doing good to the poor but expecting no return. Though not well acquainted with the British Dental Association in Glasgow, we are well acquainted with the Faculty of Physicians and Surgeons, and we know that it has had a long and honoured existence. There is a tie between the corporation, of which I am the head, and this Faculty of Physicians and Surgeons, which perhaps may be interesting for some of you to hear. I think I am right in saying that the Faculty got a royal charter at a time when there were only as many thousands of a population in Glasgow as there are now hundreds of thousands, but before this charter, received from King James VI. in the sixteenth century, was carried into operation, with good taste and good feeling the Faculty came to the Town Council of Glasgow and asked them to countersign it; and so the Faculty of Physicians and Surgeons had both royal favour and also the favour of the corporation; and I trust that when you next visit Glasgow we shall be able to extend to you the hospitality of the city. We shall know better the importance of your Association, and we shall be better aware of how much you have done to raise your business to the rank of a profession. I feel sure that I am speaking the sentiments of the medical profession in Glasgow, as well as of myself, when I say that it is a very desirable thing to establish

Transverse section of "Nerve" of Tooth, showing bundles of nerves and the vessels.

Course of the Nerve Fibres in dental pulp.

Illustrations to Mr. T. Charters White's Paper. Journal of British Dental Association, September, 1887.

Section across the Dentinal Tubuli.

Longitudinal section of "Nerve" of tooth.

Illustrations to Mr. T. Charters White's Paper.
Journal of British Dental Association, September, 1887.

The pulp cavity of a molar tooth nearly filled with secondary
Dentine.

Pulp of tooth showing formation of Secondary
Dentine--the whole of the pulp ossified, except
the vein and artery.

Odontoblasts projecting from edge of dental pulp.

a dental section of the British Medical Association, and if any such thing should take place before this time next year, when it is my part to welcome the British Medical Association in Glasgow, I shall do so with more pleasure if I am welcoming some of the friends who are here to-night. I did not know till to-night how perfect you have made your preparatory education, and how carefully you have guarded the entries into your profession. I rejoice at it because it is in the interest of the public. I trust that the time is not far distant when every dentist will be able to attach to his name the letters L.D.S., and I hope that along with these letters there may follow a fitting accompaniment of the L.S.D.

The CHAIRMAN here intimated the sum referred to at the commencement of the proceedings had all but been realised.

Dr. SMITH then proposed the "Health of the Chairman" and associated with it the name of Mrs. Brownlie, to which the Chairman replied.

The CHAIRMAN, supported by Mr. CUNNINGHAM, next proposed "The Croupiers," Mr. J. S. Woodburn and Mr. Rees Price, who each suitably responded.

Mr. HUTCHINSON stated that the total amount collected in the room during the evening reached the sum of over £150. The company then separated.

Benevolent Fund, 1887.

Jubilee Donations.

Eastern Counties Branch, per — Coxon, Esq.	£10	10	0
Hutchinson, S. J., Esq., 64, Brook Street, London, W. ...	10	10	0
Rogers, Richard, Esq. and H. P. Fernald, Esq., Alma House, Cheltenham	10	10	0
Saunders, Sir Edwin, 13A, George Street, Hanover Square, London	10	10	0
Sherwood, Martin, Esq., Oxford	10	10	0
Smale, Morton, Esq., 89, Seymour Street, W.	10	10	0
†Stack, R. Theodore, Esq., 10, Westland Row, Dublin ...	10	10	0
*Western Counties Branch, per J. F. Browne-Mason, Esq.	10	10	0
West of Scotland Branch, per J. R. Brownlie, Esq. ...	10	10	0
"Anon." Glasgow (A Friend)	10	0	0
Ewbank, F., Esq., 24, Queen Anne Street, London ...	5	5	0
Tomes, C. S., Esq., 37, Cavendish Square, London ...	5	5	0
*The Lord Provost of Glasgow	2	2	0
*Alexander, D. M., Esq., 117, Wellington Street, Glasgow	1	1	0
Biggs, John A., Esq., 46, Great George's Road, Glasgow	1	1	0
*Browne-Mason, J. T., Esq., Exeter	1	1	0
*Fothergill, Wm., Esq., Darlington... ..	1	1	0

* Paid.

† Promised provisionally.

*Kirby, Amos, Esq., Bedford	...	...	...	...	£1	1	0
*Shillinglaw, Wm., Esq., Birkenhead	...	...	...	...	1	1	0
White, Thos. Charters, Esq., 32, Belgrave Road, London					1	1	0
Wilson, Andrew, Esq., Edinburgh	...	...	...	...	1	1	0
Woodiwis, W. Somerville, 1, Tower Street, Hartlepool	...				1	1	0
*Pearsall, W. B., Esq., Dublin	...	...	...	...	1	0	0
Browne-Mason, C., Esq., 2, West Park Terrace, Scarborough	...	...	...	...	0	10	6
Fothergill, J. A., Esq., Darlington	...	...	...	...	0	10	6
Kluht, Henry J., Esq., 44, Norfolk Terrace, W.	...	...			0	10	6
*Dall, W., Esq., 4, Newton Terrace, Glasgow	...	...			0	10	0
*Finlayson, M., Esq., Leith	...	...	...	...	0	10	0
*McGregor, M., Esq., Edinburgh	...	...	...	...	0	10	0
*Walker, P. S., Esq., 23, High Street, Dundee	...	...			0	10	0

Subscriptions.

Ewbank, F., Esq. (for 1887 only), 24, Queen Anne Street, London, W.	...	...	...	...	...	5	5	0
Tomes, C. S., Esq. (for 1887 only), 37, Cavendish Square, London, W.	...	...	...	...	...	5	5	0
†Smith, J., Esq...	...	...	...	...	...	2	2	0
Biggs, John A., Esq., 46, St. George's Road, Glasgow	...					1	1	0
Browne-Mason, C., Esq., 2, West Park Terrace, Scarborough	...	...	...	...	...	1	1	0
Campion, G. G., Esq., 264, Oxford Road, Manchester	...					1	1	0
*King, R. F. H., Esq., Newark	...	...	...	...		1	1	0
*King, Roff, Esq., Shrewsbury	...	...	...	...		1	1	0
*McStay, J., Esq., 39, King Street, Belfast...	...	...				1	1	0
*Sherwood, Martin, Esq., 17, Beaumont Street, Oxford	...					1	1	0
Storey, John Charles, Esq., Hull	...	...	...	...		1	1	0
*Woodiwis, W. Somerville, Esq.	...	...	...	...		1	1	0
Yeates, G. W., Esq., 24, Lower Bagot Street, Dublin	...					1	1	0
*Andrew, J. J., Esq., 2, Belgravia, Belfast	...	...				0	10	6
*Coxon, A., Esq.	...	...	...	...	...	0	10	6
*Payling, R., Esq., Peterborough	...	...	...	...		0	10	6
Rymer, James, Esq., 10, Bentinck Street, Manchester Square	...	...	...	...	...	0	10	6

The Hon. Treasurer of the Benevolent Fund of the British Dental Association has received the above list of subscriptions and donations given and promised at the dinner of the British Dental Association, at Glasgow, and believes that it is correct ; should any item, however, not be so, he will be glad to hear from the donor and will rectify the error. He hopes to send official receipts in the course of a few days, but absence from town has delayed his doing so.

* Paid.

† Promised provisionally.

THE EXCURSION.

At 9.30 on Saturday morning about 150 members and their friends, including ladies, assembled at the Queen Street Railway Station, and travelled thence by special train to Dumbarton. Arriving there they made their way to the large ship-building yard of Messrs. Denny Bros., one that has helped to make the Clyde famous throughout the world for its special branch of industry. There they met with a most courteous reception, and were "personally conducted" by Mr. John M. Denny, one of the partners of the firm, over the works.

The selection of such a visit was a most happy one on the part of those who were responsible for the day's proceedings; anything in the way of mechanics is sure to find a responsive chord in the mind of a dentist, and the interest displayed was quite equal to what would be expected. It would be tedious, almost impossible to enter into detail; everything was to be seen in connection with ships and ship-building, and could be observed in operation, from the preliminary model of the hull of the future ship cast in paraffin wax—then all the stages in the framing and construction of the ship, its plating and sheathing—down to its final fittings and decorations. The transition in passing from one to the other of the different departments was sometimes almost startling. In one building a huge steam hammer would be seen at work, welding together large plates of white-hot iron, while in another would be found delicate, mathematical instruments, where, as in the case of a galvanometer, such a material element as weight would be entirely eliminated, the functions of the ordinary needle being effected by a beam of light. At the conclusion Mr. Denny led the way to a large hall, where he had most liberally provided light refreshments and champagne for his guests, and acknowledged in a most graceful speech the warm thanks which Mr. Brownlie tendered to him on behalf of the Association for his kindness and courtesy.

An adjournment was then made for the steamer, "Shandon," which was lying off the pier in waiting, but it was destined to wait for a short time, as a large East Indian craft blocked the channel outwards. The merchantman, however, eventually moved sufficiently, and the "Shandon" steamed out into open water towards Greenock, where a second contingent was waiting its arrival, and gladly hailed its approach. The day was now well established, and

any doubts as to the intention of the sun to shine were entirely removed. The sail up Loch Long was a most beautiful one; the lights and shadows cast upon the purple, heather-clad hills by the passing clouds showed them off to their best advantage, and the blue waters of the loch beneath and the blue sky above combined to form a picture which many will ever remember among their pleasantest associations.

Lunch was served on board in a most satisfactory manner, and to judge by the alacrity with which the call bell was responded to there seemed little doubt but that everyone was quite ready for it. Arriving at the head of the loch a halt was made, a small party disembarked *en route* for the northern Highlands, and the vessel then turned and steamed homewards. The return journey was an equally pleasant one, enlivened by some excellent music from the band in the after part of the boat, till, on reaching Greenock, a large detachment left, including the President, who received a most enthusiastic and hearty cheer. At Dumbarton the trip came to an end, and after walking from the pier to the station the "special" was brought out from the siding, and in due time Glasgow was again reached.

Midland Branch.

AN informal meeting of the members of this branch will be held in Lancaster, about the third week of October.

Members of the British Dental Association, residing in Cumberland, Westmoreland, Northumberland, and the North Riding, are specially invited to attend, and also to endeavour to enlist new members. Forms of application for membership may be obtained of the undersigned. Full particulars of time and place of meeting will appear in next month's Journal.

W. H. WAITE,
Hon. Sec.

10, *Oxford Street, Liverpool.*

APPOINTMENTS.

S. C. GIBBONS, L.D.S.Eng., J. H. REDMAN, L.D.S., D.D.S., and E. M. TOD, I.D.S.Eng., have been appointed Consulting Dental Surgeons to the Brighton Dental Hospital.

ORIGINAL COMMUNICATIONS.

On Some Points in Dental Histology bearing on
Conservative Treatment of the Pulp.

BY T. CHARTERS WHITE.

THE advance which dental surgery has made of late years may be greatly attributed to the conservative element introduced into its practice. The forceps has given place to the burring engine and the nerve extractor, while antiseptic surgery has found warm supporters in the ranks of all our practitioners. An accurate knowledge of the histological characters of the dental pulp and its relation to the dentinal tissues has greatly conduced to the favourable results we see in our conservative treatment of the teeth, leading us to retain the pulp in all its integrity wherever this is practicable, and it shall be my endeavour in these few remarks to urge on my brethren the desirability of preserving rather than of destroying the pulp, if we would attain complete success in every case of exposed nerve which may come under our hands. There are so many cases in which the pulp is hopelessly decomposed and disintegrated before we have the chance of treating it, that these may be excluded from our notice for this time, but it is to that class of cases wherein the nerve not actually exposed is covered with a layer of decalcified and softened dentine that I wish to direct especial attention. I trust that you will pardon me if I inflict on you a brief description of the elements entering into the formation of the dental pulp, or what is popularly called "the nerve of the tooth;" it would enable us to understand the substance of my future remarks, and to comprehend the *rationale* of the treatment to be recommended. We scarcely need go back to that early period in the genesis of a tooth germ, which, according to the observations of MM. Robin and Magitot, commences about the thirtieth or sixtieth day of embryonic life, although it must be admitted that many of the carious conditions we have to treat may date their origin from influences at work in the maternal constitution at that time. It will be sufficient for our purpose to examine the histological elements entering into the formation of the dental pulp in what may be termed a provisionally completed tooth when the tooth is ripe for eruption—when dentinification has arrived at a normal condition of rest. If, then, such a dental pulp be examined in sections under the microscope, such an appear-

ance will be presented as that seen in the photograph (No. 1), of the longitudinal section, which I now hand round, where the nerves and vessels, entering together in bundles at the apical foramen of the fang, become separated into smaller bundles, and traversing through the mass of areolar tissue which forms the bulk of the so-called "nerve," ultimately become diffused as single fibres; in the photograph No. 2, of the transverse section of dental pulp, the nerves may be seen appearing as groups of dots, while the vessels show as circular openings, but it will be noticed that although this section was taken about one-third from the apex of the pulp, yet the bundles of nerves have become very diffused and course through a basis of areolar tissue, accompanied for the most part by the vessels. But we have in the histology of the dental pulp other elements which we must not by any means lose sight of. At the margin of these preparations may be noticed a number of oval bodies crowding upon each other so thickly that it is difficult to photograph them, but here and there, where one or more are pressed out of the range, they may be seen (photographs 3 and 4); it is these bodies which it should be our constant endeavour to preserve; these are the odontoblasts whose primary office has been the formation of the dentine. The first germ of the dentine is formed at the bottom of the dental groove in the embryo, and is a special division of the mucous tissue of the groove; after it has attained a certain size these odontoblasts, to which I have just directed attention, develop from the cells, forming the periphery of the germ, and soon after the little caps of dentine we are all familiar with in foetal jaws begin to form on the crown of the germ.

Stricker puts the development of the dentine so clearly before us that I cannot do better than quote his words. He says: "Whilst the peripheric portions of the odontoblasts constantly undergo metamorphosis, with disappearance of their nuclei into a gelatinous matrix which subsequently undergoes calcification, their centric portions penetrate the hardened mass in the form of longer or shorter threads, and represent the first rudiments of the dental fibres. The lateral processes of the odontoblasts occasion the numerous anastomoses of the dental fibres or of the dental tubuli. Every odontoblast communicates with the more deeply situated and successively enlarging cells of the young pulp, by means of its pulp process, so that when an odontoblast is calcified up to the base of the fibre, another occurs in its place without any interrup-

tion to the continuity of the fibre. Hence every dental fibre with its anastomoses must be regarded as formed of several continuous odontoblasts." And he concludes this paragraph by saying: "Thus it appears that the dentine, with all its constituents, proceeds from odontoblasts that have become metamorphosed in their form and chemical composition."

So much, then, for the histological characters of the dental pulp. If now we take a thin section of a tooth and decalcify it by soaking it in a weak solution of hydrochloric acid in water, it may, by a little adroit management, be torn in several portions, when we shall see that the tubes of the dentine contain delicate translucent fibres; these are known to most of us as the dental fibrillæ of Tomes. These fibrillæ occupy the dentinal tubuli and are contained in a sheath which is very indestructible and tough; these fibrils terminate at the peripheral extremities in loops formed by their union with neighbouring fibres, but by reason of the extreme fineness of these terminations this union is difficult to demonstrate, yet regarding the tooth as an ossified papilla, and judging by what we know of the structure of other papillæ, we may with reason infer that similar conditions exist in the dentinal structure.

Like most nerves terminating in papillæ they are exceedingly sensitive, as we often have an opportunity of seeing, and our patients of feeling, in excavating the carious dentine just beneath the enamel where these tubes terminate. These fibrillæ are intimately connected with the odontoblasts, but their connection with the ultimate fibres of the dental nerve in the pulp has not been demonstrated; however, seeing the acute pain they set up there must be some method of communication with the general nervous system which we at present are not in a position to define, but we can reasonably believe that these fibrillæ are important factors in bringing about the favourable changes it is the purpose of this paper to advocate.

It must always be borne in mind that at all times after the formation of the dentinal structure the odontoblasts, which played such an important part in its formation, still retain their power of continuing their functions, this power only remaining in abeyance till some stimulus wakes them up from their dormant condition. We have evidence of this in the formation of that irregular condition known to us as secondary dentine, and which takes place under the influence of such gentle stimuli as the grinding down of the enamel on the masticating surfaces of the teeth, or the

gradual advance of caries. Seeing, then, that they possess this power in a healthy pulp, it becomes highly desirable that in all cases of caries where a softened and decalcified layer of dentine can be left it should be to maintain the pulp intact. It is therefore a good plan, whatever some may say to the contrary, to leave some of the softened dentine, if we can feel tolerably certain that no decomposing pulp exists beneath it, while removing the carious portion of the cavity as thoroughly as we desire from its sides and around the orifice; should the pulp be painful after this disturbance, this irritation may be lulled by a five minutes' application of a cotton plug steeped in a 25 per cent. solution of cocaine, after which a soft portion of any of the osteo-plastic stoppings in use may be employed with as little pressure as possible to avoid indenting the softened layer of bone; when the osteo has set, any stopping deemed suitable may be adopted. It is seldom afterwards that we hear any more of that tooth and its troubles, as the chemical action of the osteo hardens the softened dentine, and moreover the slightly irritating action of it may stir the odontoblasts to their former energy when secondary dentine completes the cure. It is not possible to put to the proof of subsequent examination a tooth which has been subjected to the treatment advocated, for it is seldom that an opportunity arises; but I think we may be justified in believing that, seeing the osteogenetic characters of the odontoblasts, it is before all things desirable to keep them instead of destroying them entirely. The photomicrographs I pass round will illustrate this, as in one case of caries attacking the neck of a central incisor the osteogenetic function of the odontoblasts was stirred up to action, and the whole of the pulp was converted into secondary dentine, except the vein and artery; in another photograph nearly the whole of the pulp cavity of an eroded molar is shown to be filled with this secondary formation. These instances serve to show the importance of this odontoblastic layer in combating the advance of caries, and urging upon us the desirability of not destroying the pulp of a tooth except in those cases where its undoubted disorganization already exists.

During the discussion which ensued, Mr. WHITE said the diagnosis was determined by the amount of pain. If the nerve was not exposed, but covered by, say, one-sixteenth of softened dentine, he did not see much danger of decomposition, but he well

syringed the cavity with carbolic acid, so as to thoroughly disinfect it previous to further treatment. The carbolic acid he used was about one in forty, and not strong enough to destroy the nerve. Exposed pulps he should destroy with a very small portion of the strongest carbolic acid, and the very smallest amount of arsenic. Mr. White gave the result of an experiment with the canine tooth of a child. He drilled a hole in the tooth and put in carbolic acid and arsenic, covering the tooth with Canada balsam and wax to keep it moist. The next day he had cracked open the tooth to see how much had been acted upon, when he found a well-defined band of destruction.—[ED., J.B.D.A.]

Treatment of Sensitive Dentine by Nitrate of Silver.*

BY W. GEORGE DAISH, L.D.S.Eng.

MR. PRESIDENT AND GENTLEMEN,—It is not with an idea of bringing forward anything new that I have put these few notes together, because we have always been in the habit of using nitrate of silver for certain cases, such as the erosion which sometimes occurs at the necks of teeth, just at the margin of the gums, the extreme sensitiveness of which will often defy any other treatment.

Again, in shallow sensitive cavities at the back of the mouth, an application of the salt is very useful, sometimes before putting in an amalgam filling. But during the last five years, I have met with a few cases, in which its use was, perhaps, what may be called exceptional, and thinking they might prove interesting, I have ventured to bring a short account of them before your notice to-day.

In the summer of 1882, a gold filling fell out of a distal cavity in my own first right upper molar, and there not being time to do a permanent stopping, it was refilled with Jacob's gutta-percha. After a few days it began to feel uncomfortable, then gradually to give decided pain, and as it continued, the filling was removed, and a wool dressing substituted. Then came the difficulty. The pain occurred in paroxysms, every two or three hours; it would come on without any apparent cause, and unfortunately would also subside of its own accord only; it was perhaps worse at night, but during the day it would come on suddenly and disappear just

* Read at the Annual Meeting of the Southern Counties Branch, at Croydon, July 16th, 1887.

as suddenly. The cavity, though of a good size, was not a very bad one, and the dentine was fairly dense all over; the use of the excavator not causing any particular pain. We tried oil of cloves, carbolic acid, and then the two in conjunction, sealed in with benzoin and tannin dressing, without producing any effect; then we tried eucalyptus oil and camphor, and failing with that, Scott's "nerve-obtunder" was used. At first we hoped it would do good, as the tooth felt easier, but in a short time the pain returned, and was as worrying as ever. The "obtunder" had often been used in other troublesome cases with marked success, so we began to wonder what next to try, as it had been going on for nearly a week. I then suggested nitrate of silver, looking upon it almost as a last resource. A small piece of cotton wool was saturated with water and rubbed over a crystal of the caustic, dissolving enough to make a pretty strong solution; it was then inserted in the cavity and allowed to remain for about two minutes. The application caused some pain at first, but it gradually subsided until the tooth became thoroughly comfortable, when a wool dressing saturated with tincture of benzoin and tannin was placed in the cavity to remain for a few days. The pain never recurred, so the tooth was again filled with gutta-percha, which after about eighteen months was replaced by a Rogers-Sullivan stopping. The treatment turned out quite a success, and the pulp of that tooth is alive at the present moment.

In Watt's Chemical Essays we read that when nitrate of silver is applied to the skin, the immediate result is a whitish mark, caused by the union of the salt with the albumen of the cuticle. This soon becomes black, by the decomposition of the salt and the reduction of the oxide of silver. It is evident, then, that for each atom of silver set free, an equivalent of nitric acid is liberated. These facts help us to understand its action on dentine, for we find that the salt acts promptly upon the gelatinous portion of the tooth, destroying its vitality to the extent of the combination which takes place, and by the decomposition of a part of the salt, and the consequent liberation of a part of its acid, it acts also with energy upon the calcareous portion, but the compound formed by the nitrate with the organic constituents of the tooth is insoluble except in a few substances, and, therefore protects the subjacent parts. The precipitation of the reduced oxide on the surface also affords some additional protection, and the insolubility of the compound prevents the absorption of the nitrate by the dentine, rendering its action necessarily superficial.

This is a very valuable property, because unless the dentine covering the pulp be so thin that it is all used up in the chemical combination which takes place, the application would not in the least endanger the pulp, but would even add to its safety, by relieving the irritation of the dentine which might otherwise extend to it.

When the nitrate is neutralized by an equivalent of the constituents of the dentine uniting with it, no further chemical action can ensue, but it should be borne in mind that the compound formed by its union with the organic portion of the tooth is soluble in a solution of the nitrate.

If applied in too great a quantity, or too frequently, there may be a greater loss of substance than is desirable or at all necessary, for, as long as free nitrate remains in solution in the cavity, the insoluble compound is not precipitated, and the surface is therefore exposed to its continued action. In view of these facts, it would, perhaps, be better to use the nitrate in the solid form, or where that is not practicable, one application of a saturated solution would be better than repeated doses of a weaker solution.

My second case was that of a left upper second bicuspid in the mouth of a lady of about forty years of age. The cavity was an old one, in the centre of the crown, involving parts of the mesial and distal walls, which were very much broken and ragged. The pain from it had been very troublesome, so after the first failure with ordinary dressing, a solution of the nitrate was applied on cotton wool; [it did not wholly arrest the pain, and after a few days a second application was ventured upon. The result was a marked improvement in the condition of the tooth, and as the patient wished to go away for a few days, a wool dressing was placed in the cavity and allowed to remain for about a week. On her return she said that the tooth was quite comfortable, and was good enough to attribute the cure to the change of air she had taken since her former visit. The cavity was filled with porcelain, and the tooth never gave any more trouble.

In another instance, a lady came to me complaining of pain in a first right lower molar. I discovered a mesial cavity, which, though not deep, extended almost from the labial to the lingual side of the tooth. Not wishing to break through the crown, the cavity was easily excavated from the labial side, and as the dentine was rather sensitive, after dressing with oil of cloves and

carbolic acid, it was filled with Hill's stopping. The tooth was readily quieted, and remained perfectly comfortable for about three weeks; it then began to give trouble, causing a sort of neuralgia over the right side of the head, and it was so worrying that I thought it necessary to remove the filling, fearing that, owing to the position of the cavity, the gutta-percha might be pressing a little upon the gum—a condition which, in some patients, causes a great deal of irritation; the gum, however, was quite right, the pain quickly subsided under an oil of cloves dressing, and the patient went away much relieved. Unfortunately she returned the next day, saying that the tooth had been aching at intervals all through the night, and was still very bad indeed. The dressing was then removed, and after syringing the cavity with warm water, a piece of cotton wool saturated with Scott's nerve obtunder was inserted; this immediately relieved the pain, and after waiting a few minutes, the patient pronounced the tooth quite comfortable. Her frequent visits were extremely inconvenient, as she lived at a considerable distance, and did not like spending a whole day over a single tooth dressing, so I gave her a bottle of the obtunder, explaining how to use it, and lent her an instrument to work the dressing in with, telling her to go on renewing the application at intervals for about a fortnight. For the first two days everything went on well, but on the third night the tooth took to aching so persistently, that she could do nothing with it; frequent doses of the obtunder had no lasting effect, and she came to me the next day begging me to extract the tooth and so have done with it. This I objected to, wishing very much to save the tooth, as it was a most useful one for mastication, and told her that there might yet be one other chance of quieting it, if she did not mind a slight discolouration. She consented to try again, and this time I applied a piece of cotton wool saturated with a solution of nitrate of silver; it increased the pain slightly at first, but it then gradually declined, and the cavity was filled with an ordinary dressing. She remained in the town a few hours to see how matters progressed, but the pain not recurring, went home, and did not come to me again for a week. During that time there had been no more pain, so after allowing another piece of wool, saturated with the solution, to remain in the cavity for about a minute, I syringed it out, and once more filled with gutta-percha. About a month after she sent a note saying that the tooth was still going on quite comfortably, and

that the success of the treatment was quite worth the little discolouration. This is now about twelve months ago, and I heard a short time since that the tooth has never given a moment's pain. The gutta-percha is still in the cavity, but it will be replaced by a permanent filling on the first opportunity.

A few other cases have occurred, but it is not necessary to describe them, as they were very similar to the above, and the results have, in nearly all, been equally successful. The chief disadvantage to the treatment, besides the unpleasant taste, is the discolouration produced by the reduced oxide, making it only suitable for back teeth, but fortunately, as the action of the salt is superficial and it is not absorbed, it does not stain the body of the tooth, the worst appearance in most cases being a dark line round the edges of the filling.

Epulis.*

By C. A. HAYMAN.

THE following is a short account of an epulis that came under my notice some time since.

In September, 1881, a lady, of about middle age, came to consult me about her teeth. There were some very diseased upper incisor stumps; they were nerveless and thoroughly necrosed. Between the two centrals was a small swelling, about the size of a pea, which seemed to be connected with them. I strongly advised their removal, but the patient, who was very nervous, would not consent to the extraction of more than one. I hoped, after this, the swelling would subside, but this was not the case, as the growth continued, but not rapidly, as it was not until December, 1886, that I saw it again; but by that time its condition had seriously altered, and the size increased considerably.

The small swelling, before referred to, had grown about as large as a walnut, and, of course, interfered with mastication and articulation, as the lower teeth came in contact with it constantly, preventing the closing of the mouth.

As regards the etiology of this growth, all authorities agree that the most common cause is a diseased stump or tooth, having rough and ragged edges and the fang rough and denuded of its

* Read at the Annual Meeting of the Western Counties Branch, at Stroud. July 29th, 1887.

periosteum ; these conditions would be quite enough to set up inflammatory action, and cause an abnormal growth ; such a condition of things was present here.

As regards treatment, this, as in most cases, was very simple. I tied a piece of silk very firmly round the base, and allowed it to remain for three days ; by this means the blood supply was lessened, and the chances of hæmorrhage afterwards less likely. A local anæsthetic was then applied for the removal of the stumps involved, and of the epulis. It is considered necessary to take away the piece of bone to which the growth is attached, or to thoroughly scrape it, in order to prevent a recurrence, but in this case the patient would not submit, so I had to trust to the natural shrinkage and absorption of the alveolus to remove the affected part. This treatment has been successful, and up to the present date, which is a period of seven or eight months, there has been no recurrence of the growth, and the gum looks perfectly healthy.

General Remarks.—Epulis or connective tissue tumours of the gum are one *variety* of the large class of sarcomata, and therefore in their consideration it will be necessary to take into consideration some of the general points characteristic of sarcomata in general. Paget calls these fibro-plastic tumours, and groups them with certain tumours having a structure analogous to that of the medulla of bone ; these he called myeloid tumours. Sarcoma, then, is defined as a tumour, formed of embryonic tissue, either pure, or underlying one of the first modifications previous to becoming adult tissue. Thus, when embryonic tissue is changed into fibrous tissue from the spherical form, its cells become elongated and fusiform, and an amorphous or fibrous ground substance is formed between them. This is an embryonic state of connective tissue, and tumours showing such a structure as this are called sarcomata.

Almost the whole mass of these tumours in their early stages is composed of cellular elements, hence Forster classifies them amongst those solely composed of cells. Sarcoma cells assume most varied forms ; sometimes they are spherical when in water, at others, angular and irregular, and contain one or many ovoid nuclei ; they are furnished with processes which often anastomose like ordinary connective tissue cells ; many are fusiform, with ovoid nuclei as seen in certain cranial tumours. The number of nuclei in one cell varies from one to fifty ; they are formed in large numbers in cells called “giant cells,” and described by Müller
hen in sarcoma, by the name of “mother cells.”

Myeloid sarcoma is a soft tumour, and its seat is always in the bone, which it may completely destroy, and transform into a red mass, its course being only arrested by the deep calcified layer of articular cartilage. When these tumours occur on the alveolus they are called epules, and are sometimes myeloid, and sometimes ossifying sarcomata. They are covered by buccal mucous membrane, and sometimes have osseous trabeculae regularly arranged, presenting the appearance of young medulla.

Mr. Tomes says that tumours springing from the margin of the gum are usually called epulis, but the term is becoming restricted to those which grow from that portion which lies between two teeth, and by its growth separate, and in some instances cover, them; the base may be broad or pedunculated. The site of the disease is usually the soft tissue contained in the Haversian canals of the bone, and in its growth it carries before it the superjacent mucous membrane.

Mr. Salter's remarks agree with the foregoing; he tells us the endosteal membrane shares in the genesis of an epulis tumour, and the fibrous growth appears to burrow, so to speak, into the substance of the bone, producing a general expansion of the whole structure.

Mr. Tomes divides epules into three classes:

The first are composed of fibrous tissue with fibro-plastic cells.

The second, those composed of elastic fibrous tissue.

The third are composed of myeloid cells.

The last mentioned Mr. Heath describes as having the characteristics of a giant-celled sarcoma.

Mr. Hutchinson also describes a case, showing all the characters of myeloid growth, and scattered in its structures were some detached masses of spongy bone.

All authorities agree as to the innocence of growths of this kind, and as to the improbability of recurrence after complete eradication. Epulis quite conforms to the usual rule applicable to most of the sarcomata, and there need be little fear of any repetition of the growth, either in the part first affected or elsewhere.

As regards the microscopical appearance of this particular tumour. It answers to the first class described by Mr. Tomes; it is composed of fibrous tissue arranged in bundles, and the fibres cross and twine round about these bundles; there are numerous small nuclei interspersed throughout the whole substance of the tumour, but they are particularly numerous round the foramina

which represent the bloodvessels ; there are no myeloid cells to be seen, therefore it cannot be called a myeloid sarcoma. The sections show nothing more than a hypertrophic condition of such structures as are found in the normal gum ; no new or abnormal elements are there, but the fibro-areolar gum structure shows *abnormal activity*, as indicated by the presence of a great excess of nuclei and leucocytes.

I am indebted to Mr. Charters White, of London, for taking some very interesting photographs of microscopic sections of this epulis, which show the fibro-cellular structure very clearly.

Notes on a Medical and Experimental Electro-Dynamic Machine.*

By C. J. BOYD WALLIS.

THAT electro-therapeutics are becoming every day more important in medicine, is evidenced by the appointment of specialists in this line of practice to some of our hospitals ; and in spite of the divergent opinions which have hitherto divided practitioners, it may be hoped that the time is not far distant when the employment of electricity in the treatment of disease will cease to be regarded as a quack remedy, and will be, with the aid of the volt and milliampère meters, and other precise measuring apparatus, administered in doses medically and scientifically correct.

The battery difficulty is the one black spot ever present to the eyes of the ordinary practitioner, and so great is the amount of labour, care, and trouble required to keep a medical battery, which for thorough work must consist of thirty or more cells, in perfect order, that the practice of electro-therapeutics has become limited to the few. Generally speaking, medical men find that at the moment their battery is required, something has gone wrong. Either the connections are out of order, the elements decomposed, or the solutions exhausted, so that the battery is practically useless, and this at a moment when one may not have the time to enquire into the errors and re-arrange the machine. To overcome some of these difficulties, I have designed the machine before you, which, I think, comes very near to what is required for the production of the continuous, the alternating or induced, and

* Read at the Annual Meeting of the Southern Counties Branch, at Croydon, July 16th, 1887.

electro-cautery currents, all of which can be brought into action in a minute, and with this great advantage over the galvanic battery--there is practically nothing to get out of order. In addition to this, the machine may, by a slight adjustment, be employed for charging accumulators, for generating the electric incandescent light, the electro-chemical deposition of metals, lighting up Geissler's tubes, and many experimental purposes. The machine consists of double electro-magnets, two rotating armatures, one for general medical and experimental purposes, and the other for the electric cautery, small surgical lamps, &c. The machine complete is placed upon a base board upon which are also arranged the hand driving wheel, a set of resistance coils, a varying resistance line wire, two incandescent lamps, and terminals. The field magnets are shunt, wound with three pounds six ounces of No. 22, b. w. g. silk-covered wire, having with the limbs in series a resistance of sixteen ohms, and four ohms when in parallel. The armatures are a modification of the drum armature of Siemens, and are composed of iron axes upon which a series of iron discs are strung; upon these discs are wound coils of wire, one armature being wound with half a pound of No. 18 silk-covered wire having a resistance of .3 ohms, and upon the other armature is half a pound of No. 14 wire, having a resistance of .04 ohms. The great advantage in my arrangement of the armatures on this system is that by using a series of discs in the place of the ordinary solid core of Siemens, over-heating and consequent loss of current is prevented; the magnetic current is intensified, while avoiding the currents which would be generated wastefully in the mass of the metal were the iron core solid. The wasteful resistance of the armature is greatly reduced, and the general efficiency of the machine is increased.

In using the machine for medical purposes, that is, for electro-massage, or the transmission of currents through parts of the body, the fine wire armature must be used with the fields in series, and resistances of from ten to forty ohms, according to the power of resistance of the patient, must be inserted as a shunt in the circuit to make the current uniform. If shocks similar to those from the primary of an induction coil are desired, the resistance may be thirty or forty ohms. Alternating currents may be obtained by introducing into the circuit an induction coil, with its break screwed up, and joining the handles to the secondary circuit, the dynamo being joined to the primary in the usual way.

For nearly all medical purposes the coils or fields may be in series as the highest E. M. F., with less quantity is thus obtained, that is, from twenty-five to thirty volts, equal to about the same number of Leclanche cells. In the absence of a set of resistance coils, incandescent lamps of known voltage may be introduced as a convenient method of reducing the current. A very fine carbon incandescent lamp requires about ten volts per inch of carbon, varying slightly according to the quality and make of the lamp. Such lamps usually have the number of volts they require marked upon the glass. When driven by hand the machine yields from two to five ampères of current with the fine wire armature *in situ*, and when driven by gas engine, from five to eight, or even ten, ampères may be obtained; therefore, when one considers that in dealing with the human body only milliampères are required, the power of the machine may be considered in every way satisfactory. When employed for the electro cautery, or for small surgical incandescent lamps, the coarser wound armature should be employed. This armature yields a maximum current of fifteen ampères if driven by the hand wheel, and twenty ampères by the gas engine. For the cautery the fields must be in parallel. Greater quantity and less E. M. F. (seldom more than four volts) are required for the cautery.

These results are chiefly based upon experiments made with the hand wheel; increased efficiency may be obtained by driving the armature with a lathe treadle, gas engine, or water motor.

I may mention that I have designed this machine more especially for my own experimental purposes. For strictly medical uses it might be arranged in even a more compact and convenient form. The resistance coils might be arranged in a circle with a switch to bring into circuit or shunt any required number of ohms, and the induction coil might be arranged on the base board always ready for use by just coupling up when required.

History of a Case treated on the Mechanical Method.*

By CHARLES M. CUNNINGHAM, D.D.S.

It frequently happens in practice that we may elect to treat a case on one of two separate lines of treatment, which, for the sake of convenience, I may describe as the mechanical and the opera-

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tive methods, that is to say, we may extract or excise the teeth that are decayed and supply plates, or we may rectify the damage by inserting fillings and artificial crowns.

There is a common belief that what I have described as the mechanical method is always the cheapest, and, therefore, the one which should be adopted in cases where the patients' means are limited, and I must confess that I have to some extent shared this opinion. Recently, however, I have obtained particulars of the history of a case treated on the mechanical lines over a period of fifteen years, which so militates against the theory of the cheapness of this method, that I have ventured to bring the matter forward as the subject of a paper.

The case I refer to is that of a lady who has earned her own living as a governess ever since she was eighteen years of age. She was first led to visit a dentist when she was about eighteen years of age, by noticing a dark speck of decay on the right upper lateral tooth. She was advised to consult a reputable man in London, a Licentiate of the College of Surgeons of England, who, without suggesting any other method of treatment, extracted the tooth and made her a small gold plate with clasps. The patient assures me that she had had no trouble with the tooth whatever, it was simply the dark speck upon it which caused her to have it seen to.

After wearing this plate for about eighteen months the patient was again compelled to visit a dentist, the teeth to which the clasps were fitted having become very tender. On this occasion she consulted a younger man, an L.D.S. by curriculum. This gentleman excised the first right upper bicuspid tooth, and made a new plate also with clasps attached. This second plate was worn for about two years, when the teeth to which the clasps were fitted became again so sensitive that the patient had to return to her dentist. This time he decided to excise another tooth, make a larger plate, and fit clasps to fresh teeth, with results precisely similar to those which followed in the first instance.

The same policy was pursued, however, and the same process of destruction continued until, after fifteen years had elapsed from the period of her first visit, the patient fell into my hands. By this time she had a large collection of plates in gold and dental alloy, showing the successive stages by which her teeth had been destroyed; not one of them could ever have been efficient for the purposes of mastication, while they must all have appeared most

obviously artificial by reason of the great absorption which had taken place where the lateral tooth had been extracted.

On examination I found the roots of the bicuspid and molar teeth in good condition, though nothing had been done to preserve them after the crowns had been excised. Much absorption had taken place where the lateral tooth had been extracted, and the four teeth to which wire clasps had been fitted were sensitive and beginning to decay. Only one tooth had been stopped, and it bore a white cement filling which had done very good service and promised to last for some time longer. I proceeded to treat the sensitive teeth and fill the cavities, then turned my attention to the roots of the teeth which had been excised. At first I felt inclined to restore them with bridge work, but as the absence of the lateral was a great obstacle to adopting this method, I abandoned the idea. The crowns of the teeth being naturally very short, there was not enough space left in the articulation to admit of masticating teeth being employed, so I decided to extract the roots and make room by absorption for the proper class of teeth. This done, I had no difficulty in adapting a plate without clasps, and which provided a good masticating surface to bite upon. This plate has been worn for two years now, and was re-struck at the end of eighteen months to suit the altered state of the mouth brought about by the natural process of absorption. But no more teeth have been lost, the plate is not injuring the remaining teeth, and the fillings, both gold, amalgam, and cement, give evidence of durability.

When we come to consider the results and costs of these seventeen years of treatment, they do not reflect much credit upon the services which our profession has rendered in this particular instance. Through the initial mistake of extracting the lateral tooth, a pretty woman, with a ready smile, was condemned at eighteen years of age to wear a denture, which from the very first must have been most obviously artificial. By the persistent use of clasps her teeth have been destroyed, so that the function of mastication has been much impaired, which fact might account for the dyspepsia the patient frequently suffers from.

During fifteen years, though yearly visits were paid to a dentist, only one filling was inserted. In seventeen years the patient has worn at least thirteen different plates, and though the fees charged were moderate—the highest charge being £5 5s. for a large gold plate—the cost in the aggregate for plates alone, and making no

allowance for repairs or indirect outlay, amounts in round figures to over £50, a very heavy tax indeed upon a woman who has had to win her own bread. The study of this case leads to but one conclusion, and that is that what I have called the mechanical method of treatment may prove to be in the end by far the most expensive, and yet so inefficient as to make it almost certain that the services rendered have been more productive of harm than good.

If the patient, whose case has been made the subject of this paper, had been able to call to her aid the highest operative ability that London can boast, and had paid for it at the highest rate of fees, she would probably have been to-day a richer, and more healthy woman, with a complete natural denture.

I have come to the conclusion that the operative method would have given different results from my knowledge of the patient and the study of the mouth itself. The patient is a person whose statements may be relied upon, and who is in the habit of keeping a correct record of all her expenditure. The mouth bears every evidence of having been originally well suited to resist the ravages of decay. The arch is well formed and without any tendency to overcrowding. The teeth are of average quality and the family history is good. The fillings which have been inserted have without exception worn well and promise the best results.

Now I trust that my motives in bringing forward the details of this case will not be misconstrued. I have no desire to censure men who may have acted with the best intentions towards their patient; but it is not often that we have the opportunity of tracing the history of a mouth from the very first day it was opened to admit a dental instrument, and summing up the results of seventeen years of treatment. Therefore I have brought this case forward in the hopes that it may help to fortify the opinions of those who believe that even poor patients are worthy of the most careful and conservative dental operations we can perform for them.

HOSPITAL REPORTS AND CASES IN PRACTICE.

A Case of Peculiar Deformity.

By G. C. McADAM, L.D.S.Eng.

A PATIENT, a female, age about thirty-eight, had all her upper teeth, from the centrals to the first molar on each side, of such a shape that one could hardly believe they had not been filed and polished for some supposed ornamental appearance. They were nearly level with the gums, slightly cone-shaped, and all edges rounded off to the labial and palatal aspect, and also the mesial and distal. In the centre of each was a transparent bead of dentine of repair of the depth of a sixteenth of an inch. The pulps were alive, and the surface of the exposed dentine highly sensitive. The patient could not masticate because of the pain produced by the changes of temperature, and the contact of the lower teeth, which teeth were in every way quite of a normal character. The treatment consisted in devitalising the pulp of all the incisors and canines, and capping the bicuspid with gold, using the canines as pivots to carry the plate for all the artificial teeth. Now what could have brought about such a condition? It was not attrition, for there were no sharp edges of enamel and no grooving about the centre. Where the lower teeth met their antagonists was the highest part. It was not like erosion, which is usually confined to the neck of the tooth. There was no trace of a syphilitic taint, and all the help to diagnosis from the patient was her remark that it came on gradually, and that she was subject to occasional attacks of dyspepsia, and had suffered at long intervals from a mild form of rheumatism. The secretions of her mouth did not show an excess of acid by the litmus test, at least not when I saw her. If it were attributable to chemical solution, why were not any of the lower teeth attacked in a like manner?

A Case of Replantation.

By N. TRACY, L.D.S.Eng.

MR. S. consulted me in March, 1884, with respect to his daughter, aged twelve, who had fallen downstairs, knocking out her two lower central teeth, together with a small piece of the outer wall of the alveolar process. The teeth had been out of the mouth for about an hour and a half; after thoroughly cleans-

ing them in warm water, I removed with a file the extreme points of the fangs ; then washed the blood from socket and replaced the two teeth into their former places, pressing them well down. In the course of a few days they became firmly fixed, and have continued so up to this time. This case is particularly interesting on account of the teeth showing no sign of discolouration, which signifies they are still alive, and that the nerve and vessels may have united again, she having felt no discomfort or difference in them from the rest.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Lectures on Certain Diseases of the Jaws.

Delivered at the Royal College of Surgeons of England, June, 1887.

BY CHRISTOPHER HEATH, F.R.C.S.

HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY.

(Continued from p. 434.)

M. GIRALDÈS would appear to have been the first author upon the subject of cysts of the antrum, and his thesis gained the Montyon Prize in 1853 ; but Mr. W. Adams may fairly claim priority of investigation, as shown by specimens preserved in St. Thomas's Museum — as indeed is acknowledged by M. Giraldès.

Mr. Adams's specimens, from one of which the drawing shown was made, show each a cyst of oval outline, attached to the inner wall of the antrum, and measuring rather more than an inch and three quarters of an inch respectively in their long diameters. These, of course, are too small to have produced any symptoms during life. The specimens given by M. Giraldès, in his *Recherches sur les Kystes Muqueux du Sinus Maxillaire*, from one of which the illustration (Fig. 7) is taken, show very varying degrees of cystic growth in the mucous membrane of the antrum. In one instance there is a single cyst at the floor of the antrum, into which an opening has been made, whilst in the others the cysts are very numerous and of very variable sizes, depending, apparently, upon a cystic degeneration of the entire mucous membrane. M. Giraldès explains the formation of these cysts as being due to the dilatation of the glandular follicles of the mucous membrane, and urges that the ordinary operation of

tapping the antrum would be useless in such cases, but that it would be necessary to open up the antrum so as to get at the seat of the disease. Fortunately these numerous cysts appear to be of slower growth than the single cysts, for it would be impossible to extirpate such numbers as are here seen (Fig. 7) without removing the entire jaw.

Fig. 7.

The contents of these cysts appear to be at first clear fluid, but of a viscid nature ; when more fully developed the fluid becomes flaky, from the presence of cholesterine, and occasionally assumes a greenish tint ; it may also become purulent, and Maisonneuve has recorded a case where pressure on the cheek produced a flow of butter-like fluid from the nose in a young woman who, for a year, had suffered from a tumour of the right upper jaw, which had been pronounced malignant, the face being enlarged and the nostril obstructed. Here puncture from the nostril, combined with pressure and injections, effected a cure, and the case must be considered as one of cyst of the antrum, but whether a mucous cyst, the contents of which had undergone solidification, or a separate formation, must remain doubtful.

Treatment.—The treatment of cystic disease of the jaw is generally sufficiently simple. The bony wall being most commonly to some extent absorbed, it is only necessary to incise the distended membrane and evacuate the fluid. The finger then passes readily into the cyst and can examine its interior, searching for any growth or tooth which may be lodged within. With

curved scissors the opening can then be enlarged by cutting away the membranous wall sufficiently to allow a free passage for any discharge. The use of a simple stimulating lotion with a syringe is then all that is required to effect a cure, which, though slow, is permanent. I have treated a considerable number of cases of cyst of the jaw in this manner, and with uniformly good results.

Broca recommends to remove the membrane covering the inner wall of the cyst, and gives a case in which Nélaton discovered a plate of bony tissue derived from a malformed tooth on the inner aspect of a cyst, but this is in most cases a quite unnecessary complication of what is usually a very simple matter.

Polypus of the Antrum.—This is not a common affection, though by no means so very rare as stated by Paget. Luschka has investigated the subject, and found polypi five times in sixty subjects, some being two centimètres in length. He gives a drawing, showing a large number of these polypoid growths in an antrum, which he considers to be hypertrophies of the submucous connective tissue, covered with mucous membrane. Billroth also describes a good example of large polypus of the antrum with a long pedicle, and regards it as a very rare affection; there is a good specimen in University College Museum (No. 658).

These polypi are closely allied apparently to the small cystic growths in the mucous membrane of the antrum, described by Giraudeau. Both affections consist essentially in hypertrophy of some elements of the mucous and submucous tissues. When the connective or areolar tissue predominates, the fleshy polypus is produced; when the glandular element is especially affected we have the cystic form produced. Intermediately, when the fibrous element is very loose and we have some glandular hypertrophy, the semi-gelatinous polypus is produced, which closely resembles the nasal polypus.

Polypi of the antrum are well supplied with blood-vessels, and bleed freely when interfered with. In some instances they appear to have a malignant character, or at least are the forerunners of malignant disease occurring in the antrum and jaw. Vidal de Cassis, who totally denies the existence of any true polypoid growths in the antrum, says that what have been mistaken for them most frequently are colloid tumours of the periosteum, but believes that many of the examples are cases of cystic growth. Syme, also, following the example of John Bell, maintains that polypi of the antrum always intrude from the nose, and are never developed in the antrum itself.

Sir James Paget has put on record (*Clinical Soc. Trans.*, xii.) a case of polypus of the antrum in which a constant flow of clear watery fluid from the nose was the only symptom. At the *post-mortem* examination "the floor of the antrum was covered with two broad-based convex polypoid growths, deep clear yellow, with the fluid infiltrated in their tender tissue, and covered with exceedingly thin, smooth membrane traversed by branching blood-vessels. They were of rounded shape, about two-thirds of an inch in diameter and half an inch in depth; they looked like very thin-walled cysts, but were formed of very fine membranous or filamentous tissue, infiltrated with serum."

Cysts in connection with the Teeth may be classed under two heads: first, cysts connected with the roots of fully developed teeth; and, secondly, cysts connected with imperfectly developed teeth, to which the term "dentigerous cysts" has been applied in modern times. Both kinds may occur in either jaw, and, in the case of the upper jaw, may be confounded with collections of fluid in the antrum, or may secondarily involve that cavity.

Cysts of small size in connection with the fangs of permanent teeth are frequently found on their extraction, but give rise to no symptoms demanding surgical interference, though sometimes they cause pain from pressure on the dental nerves. Occasionally, however, they grow to a large size, in which case they produce absorption of the containing alveolus, and give rise to a prominent swelling. They lie beneath the periosteum of the fang, and hence have been named by Magitôt periosteal cysts. The contained fluid is rich in cholesterine.

Three specimens of cysts connected with the fangs of teeth, for which I was indebted to Mr. Holborow King, are now in the Museum of the College of Surgeons (2161). Two of them (Figs. 9, 10) are quite small (one being remarkable for the length of its pedicle); the third (Fig. 8), is of the size of a hazel-nut, and was torn in extraction. The contents of the cyst were found, on microscopic examination, to consist of degenerating pus; their walls were formed of fibrous and granulation tissues, and they had no epithelial lining. This would confirm the view of Mr. Tomes that the morbid process is probably identical with that resulting in the formation of alveolar abscess, but, being less acute, a serous cyst is formed instead of a suppurating sac. In the Museum of the College of Surgeons is another specimen of a vascular thick-walled cyst, attached to one side of the fang of an incisor tooth (2161A).

Large cysts, which produce more or less absorption of the outer wall of the maxilla, are, in my experience, very common consequences of the retention of diseased teeth, but seem to give surprisingly little inconvenience to the patients, even when of large size and producing considerable deformity of the face. They are commonly confounded with cystic degeneration of the antrum.

Treatment.—An incision into the cyst evacuates a dark-coloured clear fluid, unless inflammation should have been excited, when the contents become purulent. It is advisable to cut away the thin outer wall of the cyst freely with scissors, or, if necessary, with bone-forceps, so that the cavity may granulate up. If an incision only is made, the edges are apt to fall together and reunite with a reproduction of the fluid, unless an india-rubber drainage tube is inserted, which can be attached by a thread to a neighbouring tooth.



Fig. 8.

Fig. 9.

Fig. 10.

Single Cysts in the lower jaw, as in the upper, may originate in connection with the fully developed teeth, and, as in the case of dentigerous cysts, may give rise to the suspicion of a more severe affection.

According to Broca, the great majority of cysts of the jaws have their origin in tooth-follicles. These are shut sacs, but they do not enclose a true cavity, for the space between the wall and the outer surface of the dental papilla is occupied by the enamel-organ, an organised body, but very soft and gelatinous, apt to disappear under morbid influences, and thus leaving in the follicle a cavity ready to be transformed into a cyst. Dental cysts may originate in the follicles of the first or second dentition, or in the follicles of supernumerary teeth. Their contents are ordinarily clear fluid, sometimes bloody, occasionally filamentous or gela-

tinous, and still more rarely they contain a sebaceous matter like mastic, composed almost entirely of epithelium.

But periosteal cysts occur in the lower jaw without any apparent immediate connection with the teeth, though very possibly some irritation connected with these organs may have been the original cause of the mischief. The patient finds that he has a slowly-growing tumour of the jaw, which is painless, and gives him no trouble except from the deformity. The outer plate yields ordinarily to the pressure of the growing cyst, and thus a prominent smooth tumour is formed, over which the skin is freely movable. When the bony wall is sufficiently attenuated, the peculiar crackling already described may be produced on pressure; and, if the disease is still unchecked, the bone becomes entirely absorbed, and nothing but a membranous cyst, with particles of osseous matter imbedded in it, remains. Of this a remarkable specimen from a woman aged forty-five is to be seen in St. George's Hospital Museum (II. 150). The cyst is for the most part single, and contains merely fluid, which may be clear or more or less coloured.

Cysts in connection with undeveloped teeth, or Dentigerous Cysts (coronary cysts of Magitôt), may occur in either jaw. These, as already mentioned, may suppurate and give rise to abscess, which may be confounded with suppuration within the antrum, or may project into the antrum, filling the cavity or communicating with it.

Dentigerous cysts arise in connection with teeth which from some cause have remained within the jaw, and have undergone a certain amount of irritation. They are almost invariably connected with permanent teeth, though Mr. Salter mentions a case in connection with a temporary molar occurring in the practice of Mr. Alexander Edwards, late of Edinburgh; and in a remarkable specimen belonging to Mr. Cartwright, which will be afterwards referred to, the tooth is a supernumerary one. I have also myself met with an example of cyst connected with a temporary tooth in a boy aged four, brought to me by Mr. C. J. Fox. In this case the temporary right canine tooth was wanting, and there was a cyst developed in its situation, on cutting into which I extracted seven small irregular nodules of dentine and enamel, but no complete tooth, this being, therefore, an example of the odonto-plastic cyst of Magitôt.

Mr. Tomes explains the formation of cysts in connection with

retained teeth by referring to the fact that, when the development of enamel of a tooth is completed, its outer surface becomes perfectly detached from the investing soft tissue, and a small quantity of transparent fluid not uncommonly collects in the interval so formed. This fluid ordinarily is discharged when the tooth is cut ; but when from some cause the eruption of the tooth is prevented, it increases in quantity, gradually distending the surrounding tissues in the form of a cyst.

For further microscopic details and for a full discussion of Magitot's views, I may refer to Mr. F. Eve's very able lecture on Cystic Tumours of the Jaws, delivered in this theatre, and published in the *British Medical Journal*, January 6th, 1883.

When dentigerous cysts occur in the lower jaw, they form more isolated and prominent tumours than in the case of the upper jaw, and in some cases the projecting bony wall has been removed. In St. Bartholomew's Museum is a specimen of the kind (I. 119), consisting of a portion of a bony cyst, which was removed by Mr. Earle from the external and lateral part of a lower jaw. The cyst is lined with a thick and soft membrane, which has been in part separated from it. The cavity of the cyst was filled with a glairy fluid, and at the bottom of it a canine tooth of the second set was adherent to the lining membrane. The case is referred to by Stanley, who gives an accurate drawing of the preparation. In the Museum of the College of Surgeons there is a very similar preparation (2196), showing a bony cyst of oval shape, one inch in its long diameter, lined with a thick, well-formed membrane, containing an imperfectly-formed bicuspid tooth, which was removed by Mr. Wormald from the lower jaw of a female, aged seventeen, whose case will be found in the *Lancet*, June 22nd, 1850.

Cases of dentigerous cysts may be mistaken for solid tumours. Thus Gensonl, of Lyons, has recorded the case of a girl, aged thirteen, whose antrum was distended with a large collection of yellow fluid, and contained a canine tooth attached to its wall, in whom he had made the incisions necessary for the removal of the tumour before he had discovered its nature. Mr. Syme also has related the case of a woman aged thirty-one, on whom he operated for a tumour of the upper jaw, of four months' standing, by laying open the cheek and removing the tumour with the bone-forceps. "The tumour was found to consist of a dense cyst, lined throughout with earthy matter in a crystalline form, and con-

taining a clear, glairy fluid, together with the crown of a tooth, apparently the lateral incisor." In a cavity beyond the tumour was found a fully-formed canine tooth, encrusted with a thin plate of bone. The teeth are said to have belonged to the temporary set.

When the cyst occurs in the lower jaw, and is less prominent than in the two cases already mentioned, giving rise rather to a general expansion of the bone than a distinct tumour, the disease may be mistaken for a solid tumour of the lower jaw. A case of this kind occurred to that excellent surgeon, the late Mr. S. W. Fearn, of Derby, who had the courage and honesty to publish the case (*British Medical Journal*, August 27th, 1864), and to whom I was indebted for the very valuable preparation (College of Surgeons' Museum, 2195), from which the drawing (Fig. 11) was made.

Fig. 11.

Mr. Fearn's patient was a girl aged thirteen, who had a large resistant tumour of the left side of the lower jaw, which had been growing six months. There was some enlargement also of the right side, and the teeth there were very irregular. The teeth on the left side had been extracted, with the exception of the second molar and a temporary molar. No opening could be detected in

the tumour, though there was a constant offensive discharge from its surface. Mr. Fearn removed the left half of the jaw from the symphysis to the articulation, and on division of the bone with the saw, a quantity of foetid pus escaped. The tumour proved to be a bony cyst, formed by the expansion of the two plates of the jaw, which extended for some distance to the right of the symphysis—a very unusual occurrence. The cavity is lined with a thick vascular membrane, and at the bottom the canine tooth will be seen projecting from the wall. The case was evidently, therefore, one of dentigerous cyst, due to the non-development of the canine tooth, the contents of which had, from some cause, become purulent. The mental foramen, with the nerve emerging, is still visible in the preparation. The patient made a good recovery.

A very similar case is recorded by Dr. Forget in his essay on *Les Anomalies Dentaires et leur Influence sur la Production des Maladies des Os Maxillaires*, 1859. Mr. Underwood has allowed me to have the accompanying drawing (Fig. 12) taken from the

Fig. 12.

Fig. 13.

model of a preparation which he possesses, showing very beautifully a cyst of the lower jaw, which was removed by M. Maisonneuve by sawing through the bone at two points. The canine tooth is seen lying horizontally at the bottom of the cyst. The patient, aged fifty-six, had a swelling in the lower jaw near the chin, and an opening formed behind one of his front teeth, from which a saline fluid escaped. The man made a good recovery from the operation.

Dentigerous cysts, like other cysts, may undergo alteration, not only of the contents, but of the cyst-wall. The opportunities for recognising such changes are exceedingly rare, and the only known specimen of the kind is one in the possession of Mr. Samuel Cartwright, which shows calcification of the cyst wall. The preparation (Fig. 13) is one of the right superior maxilla, which, having been opened, shows a bony cyst within the antrum and attached to its floor, but unconnected with it elsewhere. The cyst has been opened, and contains a supernumerary tooth loose in its cavity, though no doubt originally attached to its base. This is clearly a case of dentigerous cyst which has undergone calcification, and which, had it been expanded to a greater degree before this change took place, would in all probability have been inseparably united with the walls of the antrum.

The diagnosis of dentigerous cyst from other cysts is exceedingly difficult until they are opened, as, indeed, is the recognition of any form of cyst. A careful examination of the mouth may reveal the absence of a permanent tooth, or, as in one of Mr. Salter's cases, may show a temporary tooth occupying a permanent position, and this would direct the mind of the surgeon to the possible existence of a dentigerous cyst. On the other hand, however, it must be remembered that teeth may be wanting without being connected with any disease; thus I am acquainted with a family who have the hereditary peculiarity of a single bicuspid tooth on each side. When a cyst is sufficiently expanded for the wall to yield under the finger with the characteristic parchment-like crackle, there can be no difficulty in its recognition, but without this it is impossible in all cases to distinguish between a cyst and slow-growing, solid tumour. Under these circumstances, it is well to insist upon the propriety of making an exploratory puncture in all cases which are not obviously solid growths, and have sprouted so that their nature can be certainly recognized. The puncture being made within the mouth will be of no moment should a more severe operation subsequently be necessary.

The accompanying engraving (Fig. 14) shows a cyst of the lower jaw occurring in a man aged thirty-four, who was under my care in 1878. The swelling began nine years before, and was of the size of an ordinary orange, round, very hard, and fixed to the angle of the lower jaw on the right side. Its edges were well defined, there was no fluctuation nor pulsation, except that of the

facial artery, which was stretched over the tumour. Externally the tumour appeared to be solid, but examined from the mouth, the anterior part of the wall yielded slightly to firm pressure. On puncturing from the mouth through the bony wall, I entered a large empty cavity lined with soft tissue, which on microscopical examination showed portions of hyaline cartilage and cartilage with a faintly fibrous matrix, surrounded by and gradually passing into oval and spindle cells. The bony walls of the cyst were broken down and partially cut away, and this proceeding was

Fig. 14.

repeated a fortnight later. The tumour gradually diminished as suppuration went on, several pieces of bone being removed, and, six weeks after the cyst had been opened, a tooth was felt fixed at the bottom of the cavity, and on being extracted proved to be a bicuspid with a perfect crown and two small fangs. After this the cavity closed, and the swelling entirely disappeared. The case is remarkable both for the age of the patient and also for the fact that the cyst was empty, the fluid which must have been present at one time having become absorbed. A careful search for a tooth was made at the time of the operation, but

one could not be found, and its discovery at a later date was probably due to the destruction by suppuration of the lining membrane of the cyst, which had completely enveloped it.

In the Museum of the Royal College of Surgeons is a preparation (2194) of the right side of the body of the lower jaw, completely and uniformly dilated into a large spherical cyst. No tooth or rudiment of a tooth can be discovered in the cyst, but its inner surface is lined by a layer of small epithelial cells, and is thrown, in places, into thick projecting folds. Mr. Eve considers it probable that the cyst originated in the enamel-organ of an abortive wisdom or supernumerary tooth, and hence would consider it an example of the follicular cyst developed in the embryonic period (Magitôt).

Treatment.—The Treatment of dentigerous cysts is the same as for ordinary cysts, namely, a free incision and the subsequent extraction of the contained tooth. For the cure of many of these cases simple puncture will not suffice, and it will be necessary to remove a portion of the front wall of the cyst, and to fill the cavity with lint, so as to induce granulation and gradual obliteration. This may be accomplished in most instances without any incision of the integuments, and in a few more extensive cases by simply dividing the lip, and carrying the incision into the nostril.

(To be continued.)

New Antiseptics.

At the recent meeting of the British Association at Manchester, Professor William Thomson, F.R.S., contributed a paper on "The Antiseptic Properties of some Fluorine Compounds." He said that some time ago he was engaged in trying to find a substance which would act as a powerful antiseptic, &c., which was not volatile, and which was not destroyed by oxidation. He tried the effects on flour paste, and on meat chopped into small pieces and mixed with water, of a very large number of chemical compounds, and found that those which had the most remarkable antiseptic properties were the compounds of fluorine, hydrofluoric acid, the acid and neutral fluorides of sodium, potassium, and ammonium, and the fluosilicates of those bases. Of these compounds he found sodium fluosilicate to be the one which for its powerful

antiseptic and unobjectionable properties was the one which for the general purpose of an antiseptic was perhaps the best suited. This body was not poisonous, possessed no smell, and was sparingly soluble in water. It had only a very slightly saline taste, and might therefore be employed in preserving food without communicating any taste to it. Many experiments had been made with it for surgical purposes. A saturated solution which contained 0·61 per cent. of the salt was not irritating to wounds, while it possessed greater antiseptic power for animal tissues than one part of perchloride of mercury in 1,000 of water, which was a stronger solution than that which could be generally employed for surgical purposes without producing poisonous effects.

In reply to a number of questions, Professor Thomson described the method of producing sodium fluosilicate from fluor spar. It was suggested that the antiseptic under consideration might be of great value in sewage irrigation provided it had no injurious effect on vegetation. Professor Thomson said his own experiments showed that sodium fluosilicate did not destroy grass so rapidly as common salt. He had been told that the substance removed unpleasant smells from the hands, and a solution of it would therefore be useful for medical men after performing objectionable operations. Sodium fluosilicate could not be obtained in a concentrated solution. It dissolved slowly, but the small quantity thus obtained was a powerful antiseptic and deodorizer.

REVIEWS AND NOTICES OF BOOKS.

WHAT CAN A MOTHER DO TO PRESERVE HER CHILDREN'S TEETH? By H. C. QUINBY, L.D.S., R.C.S.I.

THE author of a little work having for title this question, "What can a Mother do to Preserve her Children's Teeth?" is to be congratulated most of all on the very high opinion which he must have of the energy of those ladies on whom the happy duties of maternity fall. For his work, written in an intelligent rather than a popular style, requires from those to whom it is addressed careful reading, and—assuming its counsel to be followed throughout—severe practice. Our only fear is that Mr. Quinby has under-estimated the difficulties, or over-estimated the powers, of the average parent. The rough division of Mothers

into the "busy Mither," and "the fine Mither" is after all a fairly accurate one, and we fancy that while the latter will find the attractions of society and the last three-volume story more potent than these pages, the former will lack, if not the time to peruse, at any rate the opportunity to put in practice all the advice here tendered. But the author may know more of such matters than we can claim to know.

Mr. Quinby begins by explaining the relation that the health of the expectant mother bears to that of her future offspring, so far as the development of the teeth is concerned. Then he passes to the practical care of the teeth in childhood, noting the effect of some childish habits, the evils of which are very imperfectly understood. The subject of irregularities is also treated in a manner sufficiently simple to be easily grasped by anyone of ordinary intelligence. All this is well done, and it is only in the fact that some of his requirements go beyond what can reasonably be looked for from ordinary mortals, and so are liable to fail of their purpose altogether, that there is a weak point in the volume. "Folks are like fiddlestrings," says the old saying, "and mayna be screwed o'er tight," and the screwing process is every now and then tried with a vengeance here. The remarks on the subject of tooth brushes will serve as an illustration. The writer intimates to the perplexed mother, that to get a suitable one is a sort of hopeless quest. Brushmakers think "anything good enough for a tooth brush," but Mr. Quinby will have nothing but badger's hair for babies, and for adults nothing rougher than horse hair. But when the mother has found a suitable brush, she is told that the most intelligent use of it will not of itself suffice, but that "when the teeth are not very hardy, a thread of loosely twisted silk or linen, well waxed with common beeswax should be passed through all the interstices, and every fragment of food removed." Excellent counsel, but fancy the mother of six boisterous youngsters carrying out such a programme. What a mother! or what boys!

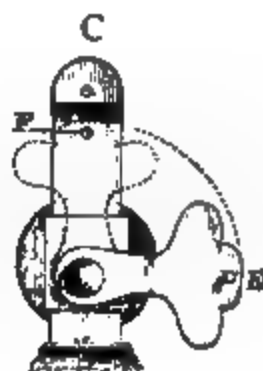
Nor can we fancy the most earnest of mothers providing herself with such an array of implements as are figured at page 37—a mouth mirror, tweezers similar to those used for gold foil, a ball syringe, excavators, and a drill. In short, the defect in the little work seems to us to arise from the writer having forgotten that attention to the teeth of her children is only one of a multitude of duties which fall on every mother, who, despite the grave

nature of the relationship in which she stands to her offspring, is at least entitled to some relaxation in life. The doctor may have been right who proved to his own satisfaction that—accidents apart—everybody might, if they would follow his regimen, live to a hundred years; but his critic was also right when he said, “that it were better to do without the years than follow the regimen.”

This single error—as it seems to us—in regard to what is practicable in the great majority of cases and under the ordinary conditions of family life, is, however, the only defect in an otherwise admirable little work, containing many valuable suggestions and some information, the possession of which will materially aid a parent in her efforts to preserve the teeth of her children.

NEW INVENTIONS.

MESSRS. ASH have recently patented a highly-ingenuous addition to the nippers hitherto sold, for punching the holes in the metal



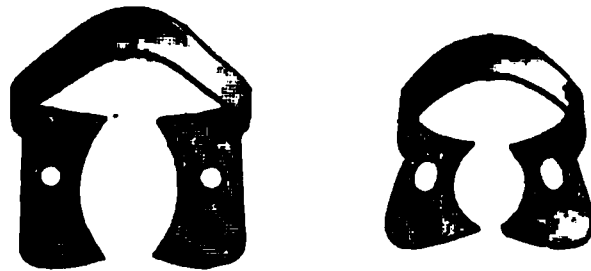
backs for flat teeth. It consists of an adjustable sliding gauge with a spring guide, the action of which may be seen from the

accompanying illustration. By means of this gauge the mistakes occasionally made in marking on the metal the distance between the two pins are avoided. Whether, in the case of a fairly competent workman, these mistakes occur with sufficient frequency to make it worth his while to go through the little ceremony of fixing this sliding gauge, may be open to question. Be this, however, as it may, there can be no doubt as to the ingenuity of the new invention, which accomplishes its object in a way simply perfect.

Those workmen who have a sort of genius for marking their pin holes a little too near to, or a trifle too far from, each other, will find life better worth living than formerly, thanks to this new patent.

A New Form of Clamp.

WE have received for approval one each of Dr. C. H. Stokes' New Bicuspid and Molar Coffir-dam Clamps, for which he claims the following advantages :



1. The hoop, which is bent in the form of a low arch, does not admit of the jaws of the clamp being placed far enough down on the tooth to hurt the gums ; it is also low enough, when the clamp is fixed in position, for the patient to close the mouth sufficiently to swallow with comparative ease.

2. The back part of the hoop is curved upwards, and serves as a guide point when stretching the rubber-dam over the clamp.

3. The flanges on the jaws are broad, and keep the dam well out of the way during the operation.

Dr. Stokes claims to have had these clamps in use for two years, and to be thoroughly convinced of their usefulness.

The clamps seem to us to be very good, and to deserve a careful trial by the profession.

ANNOTATIONS.

MR. BROWNLIE'S address at Glasgow is well worthy a careful perusal. It shows, as clearly as words can show, the spirit in which the Association should be worked. As President, Mr. Brownlie did well to enforce, with all the authority of his office, the importance of using, but not abusing, the penal clauses of the Dentists Act, and dwelt upon the conciliatory spirit which should actuate our conduct. The power to punish unprofessional conduct will some day become almost a dead letter, simply because offenders will of a necessity become rarer and rarer in proportion as the public are taught to appreciate professional conduct in its true light, and as a consequence that which is unworthy will cease to be lucrative.

THE Association unites us for our own welfare and that of the public, and one of its most beneficial effects should be to drive out from among us petty jealousy and rivalry. Our success would soon be checked, and our power for good paralysed, if one section among us were to distrust another, and it would be an evil day for the Association when its members came to range themselves into parties. Mr. Pearsall spoke very effectively upon this question of unity at the recent meeting in Dublin. Whether a man come from a large town or a small, whether he be English, Scotch or Irish, whether his essential qualification be his only one, or whether he hold every title and diploma known in surgery, as a member of the Association he should consider himself on an equality with his fellow members, and co-partner with them in promoting the welfare of dentistry and of the public for whose benefit dentistry exists.

THE Ninth International Medical Congress is now a thing of the past, and though at the time of going to press we had not of course received any details of its progress, enough has reached us by cable to enable us to state that the meeting has been a success. Its scientific achievements will be discussed when they are before us in full, and even then it is possible that we shall have some difficulty in estimating the actual work of our own section. Much of the most valuable contributions to the dental work will, we understand, take (or perhaps we should say have taken) the form of operative demonstrations, the arrangements for which are

especially perfect ; and it is difficult to put the results of these interesting exhibitions on record. Some well-known faces will have been missed, for not a few notabilities among our transatlantic fellow practitioners are suffering from over work, and among these the absence of Dr. Bogue will be seriously felt by all the dental members. We shall hope to present our readers with a full, true and particular account of the whole meeting next month.

AN account has recently appeared in a contemporary of a case in which a gentleman ordered two sets of artificial teeth for his wife and paid the moderate fee of two guineas. The work did not give satisfaction to the patient, who complained that the teeth did not fit and were practically useless. The dentist met the remonstrances of his client with the advice that patience would soon set matters right. The client refused to be consoled, and suggested in turn that a refundment of the money paid would be a more fitting solution to the difficulty. Neither party to the dispute could be induced to accept the opposing view, so that the result was a lawsuit. An expert opinion was called in and he condemned the teeth entirely, the result being that judgment was given against the dentist, who was ordered both to refund the fee and pay costs.

WE must ask indulgence on the part of our readers for any shortcomings they may discover in this number. The unusual length of it, coupled with the absence from town of some of the more active members of the staff, has thrown a great deal of additional work on the editor, and he feels consequently entitled to a special degree of leniency. A large portion of the matter contained in this month's issue must also of necessity prove tedious reading to some, but we would remind those who are inclined to complain of the lengthy reports of meetings, that the Journal of the Association is bound to record pretty fully the doings and sayings of those who represent that body at its annual meetings, and that we are specially anxious not to employ our privilege of erasure where we can possibly avoid doing so.

WE would also once more impress upon our correspondents that the earlier their manuscript reaches us the better chance there is of their seeing a proof of it. Everything of any consider-

able size should reach us by the 5th or 6th of the month, moreover, it should be directed to 11, Bedford Square, and not to the hospital, Leicester Square. And lastly, we have not been receiving anything like enough news of the "notelet" form; little scraps of gossip are very interesting, and can only be supplied from local sources, but so far our appeal for items of news has only met with response in one or two quarters, and this is a great pity. It is not necessary to write out a long article—scraps of news and cuttings from local papers would supply us with plenty of material for an interesting column or two, and we feel sure that if our readers thoroughly realised this fact small contributions would flow in with greater regularity and frequency.

WE have received the Annual Report of the Victoria Hospital, Manchester, and are glad to see that that institution is progressing satisfactorily. The connection with Owens College is of course a great advantage, and to judge from the published list of the staff there will be no lack either of energy or ability in the conduct of the school. We expect to see the list of students materially swelled next year.

WE hope our readers will be encouraged to persevere in facilitating the work of correcting the Register. As may be seen from Mr. Waite's letter this month, the work is progressing satisfactorily, but that is no reason to relax our efforts. Meanwhile the thanks of the profession are largely due to Mr. Waite for so vigorously taking the initiative.

UNDER the head of "Loose Teeth," a querist writes to the *English Mechanic* for September 2nd, 1887 :—"Can any one tell me the cause of teeth becoming loose, and of the gums receding, so that the teeth are exposed to the roots nearly? Is there any remedy?" We cannot think that it would be a real kindness to reply to such a query, unless it be to say that *one* of the reasons is neglect, and that the only remedy is to consult a registered dental practitioner.

A SUGGESTION has been thrown out more than once in the course of the many speeches of the last few weeks, about the advisability of moving the British Medical Association to organize a dental section.

THE following is a statement of operations performed at the National Dental Hospital, from May to July, 1887. C. A. PATTINSON, House Surgeon :—

				May	June	July
Number of patients attended	...	...	...	2066	1740	1466
Extractions :—						
Children under 14	...	...	...	372	357	314
Adults	...	...	...	806	891	784
Under Nitrous Oxide	...	...	...	547	563	556
Gold Stoppings	...	...	...	161	114	87
Other Stoppings	...	...	...	581	537	560
Advice and Scaling	...	...	...	503	482	234
Irregularities of the Teeth	...	...	...	211	238	368
Miscellaneous	...	...	...	337	290	381
Total...				3518	3472	3284

PROFESSOR THOMPSON has discovered a new antiseptic more powerful than any other, and less objectionable, being without taste or smell, and non-poisonous—sodium fluosilicate, to wit. We have reprinted an account elsewhere for those of our readers who care to experiment with it.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

The Dentists' Register.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—It is very gratifying to be able to announce that my letter in your last issue, on the condition of the Register, has aroused vigorous attention on all hands. I am now in a position to state that active steps are being taken to secure a thorough revision, and it only remains for our members to lend a willing hand in order to obtain that which we all desire, viz., as perfect and complete a Register for 1888 as can possibly be had.

I am, Sir, yours very truly,
W. H. WAITE.

Dental Services for the Poor.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Having held office for many years as dentist to a London general hospital, and having given some thought to the subject of dental aid to the poor, I am glad to see that discussion of the various questions involved is going on at the Branches as well as in the Journal. The subject is a wide one, may be regarded from several distinct points of view, and presents numerous difficulties. In the solution of these difficulties there is room for considerable difference of opinion ; in some there seems to me no valid ground for disagreement. Although a majority of members at a recent meeting of the Eastern Counties Branch seems to have judged that a properly organised general hospital does not need a dentist on its staff, I am strongly of the opposite opinion ; and should very much like to hear the arguments fully stated against such an appointment.

There are a large number of cases in general surgery of the jaws alone where a dentist's services are necessary—such as, for one instance, bad fractures of the inferior maxilla—cases which cannot be properly dealt with without a dental specialist's assistance. I am speaking now of fully-equipped general hospitals ; and of course my remarks apply more forcibly where a medical school is attached. There are few hospitals where teaching is not more or less carried on, and unless it be contended that some knowledge of dental surgery is not necessary to the medical practitioner, I do not see how it can be held that a hospital staff is complete without a dental surgeon. I should therefore certainly lay it down as an axiom that at least one dental surgeon is indispensable on the staff of a general hospital.

When we come to the large question, how to deal with the mass of dental suffering among the poor, while avoiding the abuses which at present accompany all forms of eleemosynary medical aid, we approach difficult and complex problems. There is no doubt the whole system of medical charity throughout the country calls for reform ; and medical is but a portion of general alms giving, which as a whole, as well as in parts, displays vast abuses and evils. This is a humanitarian age, and the result of a good deal of humanitarianism, and especially of the sickly sentimental variety of that cult, is to put a premium upon improvidence—to place the man who tries to make provision for himself and family in a worse position than he who depends on public help in all his needs. The man who makes no attempt to feed, clothe, or educate his children, or to pay for medical (including dental) assistance, is to have all these things provided, and of the best quality, by the State or by private benevolence, whilst the honest, proud and independent (though poor) individual is to struggle along unaided in his poverty. Human suffering is of course pitiable, and dental disease is not the least of the physical evils which the poor have often to bear unrelieved ; but

pauperisation is a still greater evil for the individual and the State, and how to avoid that, while ministering to the wants of the indigent, is a difficult and intricate question. I cannot occupy your columns by entering into this subject very fully ; it is one upon which your thoughtful readers will have probably formed opinions. We shall, I fear, have to wait a long time before such habits of thrift are formed to a large extent among the wage-earning classes, that they will voluntarily put aside a portion of their earnings to the support of provident institutions where medical and dental aid can be provided ; and therefore it remains only to try and reform existing institutions.

As a matter of principle I am opposed to special hospitals. The establishment of special hospitals for the treatment of disease which can be undertaken at general hospitals is an evil of growing magnitude, and one that urgently calls for abatement. Many of these institutions are really private ventures used as stalking horses under cover of which quacks or unscrupulous practitioners, greedy for wealth, may advertise themselves and lead the public to believe they are distinguished specialists. We, of course, know that our dental hospitals are free from suspicion ; but it may be noticed that already certain dental adventurers are employing means to advertise their business and to attract clients very similar to those adopted by the special hospital quacks to whom I allude. On other grounds, also, I hold it would be better that dental aid to the poor be given in the out-patient departments of general hospitals, than in special dental hospitals. If, for example, the students now working at the Dental Hospital of London were divided into parties distributed among the dental departments of general hospitals, where an efficient adequate dental staff was provided for teaching, I believe it would be better for the poor and better for the students ; better it would certainly be for the dental profession and the public, for the latter would learn more quickly through the medical profession what a valuable art dentistry has become.

Your obedient servant,
X.

LONDON, *August 30th*, 1887.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Mr. Coxon, in the discussion at Bury St. Edmunds, hit the right nail on the head when, replying to the opinion that dental attendance ought not to be provided at general hospitals, he asked, "Why should not a hospital be a benevolent institution as regards dentistry, as well as general surgery?" This question can be answered only in one way. Surely it cannot be argued that dental disease inflicts less suffering than other minor diseases dealt with in the out-patient department, or that on any grounds the patient suffering from dental troubles is less worthy of assistance. I, however, agree with those who point out the difficulties of performing elaborate dental operations, involving much time, where only one or two dentists,

unassisted by students, are engaged ; but the remedy for this is to increase the dental staff of hospitals. This is being done at some of the London institutions, and I notice that Bartholomew's, which formerly only had one, has now four dental surgeons. When one sees the vast amount of dental disease among the poor, and recognises the difficulty of dealing with it by ordinary methods, one marvels at the attitude of writers who seem to imagine that dentistry is intended only for persons of unlimited wealth and leisure. They forget that gold stoppings are far beyond the means (in any sense), not only of the very poor, but of vast masses above those. It is a very small proportion of simple cavities which can be prepared and filled with gold within an hour's time—an hour of arduous and trying work ; and how many of the population can pay for such services, or afford the time occupied ? Hence the need (and this is the main point of my letter) of more rapid methods of filling and of improved stopping materials. Provided with a good operating chair, burring engine and well-kept appliances, how many operators are there under present circumstances, who would undertake to prepare and fill simple uncomplicated cavities in less than half an hour for each case, using what is perhaps the most easily-worked and least costly of amalgams—Mr. Claude Rogers's ? And after two or three hours of such labour at the hospital, how much strength would the operator have left for private practice ? Considerations such as these show the difficulties of the matter ; the impossibility under present circumstances of doing much conservative work in hospital out-patient departments ; but because we cannot do much it does not by any means follow that we ought to do nothing.

I remain, yours truly,

A HOSPITAL DENTIST.

The Address at Chester.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—If, as I gather, Mr. Bullin is of opinion that the majority of the profession were averse to the affiliation with the Royal College of Surgeons, which took place in 1859-60, I cannot but think that he is in error, and seeing that I was selected by the College of Dentists to represent them in the discussion between that body and the Odontological Society, I have a keen recollection of the state of opinion at that time. I said at the time that I much preferred that the profession should have its home at Lincoln's Inn Fields, rather than at Cavendish Square, an opinion which subsequent events have, I think, amply confirmed. The great strides made by the dentists during the last thirty years, would not, in my opinion, have been made had we been a separate body, and I should deeply deplore any attempt to return to the former chaotic state of affairs. As one of the few who remember the days before we knew the meaning of the word *united*, I would

utter a word of warning against the unearthing of old long buried bones of contention. Mr. Bullin's kindly allusion to myself induces me to entertain the hope that my opinion may have some value in his eyes.

Yours, &c.,

THOMAS UNDERWOOD.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—Without having any desire to enter into the controversy created by the able address of my friend and successor, Mr. Bullin, of Chester, I feel it is selfish if not cowardly to remain altogether silent. All honour to Mr. Bullin for daring, in face of such odds, to express the opinions of himself and his contemporaries, and that he has done so I have not the least doubt. I fully believe if a poll was taken to-day of the old practitioners of our specialty, there would not be one in twenty to disagree with him. With regard to the desirability of expressing those opinions in the present state of dental affairs, I may perhaps have some misgiving, but, looking at the condition of our pecuniary position with the Medical Council, the state of the Dental Register, &c., &c., it is perhaps not altogether as inopportune as it at first appears. A change is coming and we shall do well to be prepared for it. I cannot conclude without expressing my surprise at the attempt to "Burke the President," and when such an initiative comes from so sapient a source as the head of our Journal, there is no wonder we should have impertinences from very junior country practitioners.

I am, Sir, yours truly,

A. M. MATTHEWS,

Ex-President.

Mount Pleasant, Bradford.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—As a country practitioner, and also a member of the Midland Branch of the British Dental Association, I must entirely dissent from the views advanced by Mr. Storey in your August issue as to the presidential address delivered in Chester.

He regrets that an official position should be used to give vent to "pent-up convictions, which after all" as he affirms "are only the views of a single man." I venture to think that pent-up views such as our honoured President holds, are equally worthy of ventilation as "the more immediate practical and scientific advancement during the year," or even "educating the public," whatever that may mean, and whilst fully agreeing with Mr. Storey in according an immense amount of gratitude to the men of all grades who have worked in the van and secured for us the Dentists Act, I hold that our President's address expresses the feelings of a large number of our members, including many who possess the L.D.S. and M.R.C.S., and that the statements therein which have provoked this controversy have not by any means been misrepresented in your editorials.

Mr. Storey cannot have read the address carefully or he would not so palpably have missed its true purport, which I take to be two-fold : in the first place it expresses the opinion that the union with the College of Surgeons in 1859, "so far as it can be called a union," was a mistake ; this I will not discuss at length now, but I assert that our esteemed President was quite within his province in expressing the hope that what he considered a mistake, would, in the course of time, be rectified by the coming generation of dentists holding the L.D.S. ; and secondly, that ere long the British Dental Association would acquire the right to manage dental affairs entirely, rather than they should be mismanaged as heretofore by the Medical Council. Surely these points were within the scope of a presidential address, else, how can any reform be affected unless ideas are expressed and discussed in this way ?

The anomalous position in which the M.R.C.S. is placed by the Act is a source of dissatisfaction to many who, whilst wishing to concede him every privilege up to the passing of the Act, do not see why the M.R.C.S. of the future should acquire the right to practise our specialty, without having any special dental training or qualification whatever. I would not say a word in depreciation of those who, having taken the L.D.S. choose to add further degrees, but we must maintain that the dental degree, *sine* further surgical and medical qualification, is complete evidence of a thorough professional education, and should be recognised as such by the medical profession, which at present is not the case.

The statement that the medical profession has all the *prestige* of an ancient profession is a truism not to be denied, but that by our connection with it our social *status* has been elevated more during the past ten years than it could otherwise have been during fifty years without it, must seem positively ludicrous to those of us who have read the sapient discussions on matters dental at the meetings of the Medical Council, and the remarks in the medical press. They do not, in fact, recognise our professional *status* and fellowship, and their overbearing and unsympathetic action in all that relates to our affairs calls for our indignant protest.

The dental funds in their hands are rapidly diminishing, and when exhausted, as they will be at no distant period, a crisis will arise which will compel us to make a determined effort to secure further reform, and complete legislative independence.

I do not write as an apologist for our President, who with his wide experience and mature judgment is quite capable of taking care of himself, but I cannot conclude without remarking that it is difficult to see by what manner of reasoning Mr. Storey, who is such a recent addition to our ranks (*vide* Dentists' Register, 1879), should feel himself called upon to speak so confidently for country practitioners, many of whom I know are perfectly in accord with the sentiments expressed in the address ; and it does seem superfluous for Mr. Storey

to empty the vials of his wrath upon Mr. Bullin, while kindly instructing him as to his duties in the presidential chair, when it is remembered that our President had grown grey in the practice of dentistry, years before Mr. Storey turned his attention to our specialty.

I shall look forward with considerable interest to Mr. Bullin's promised reply to the attacks upon his address.

I remain, yours truly,

Bradford.

E. J. LADMORE.

The Birmingham Dental School.

TO THE EDITOR OF THE JOURNAL OF THE "BRITISH DENTAL ASSOCIATION."

DEAR SIR,—The Annotations in your last issue, with reference to the teaching of dentistry in Birmingham, are somewhat misleading.

The Dental Hospital, under an agreement dated 1883, furnishes the practice required by students in the dental department of Queen's College. The responsibility of this duty on behalf of the Hospital rests with the "Surgical Committee," which has entire control of all matters connected with students attending there. This committee consists of the consulting and acting dental surgeons and the anæsthetists.

The hospital has no authorised representative on the Dental Board, nor on the Council of Queen's College; nor has it any voice in the appointment of lecturers on dental subjects.

It is somewhat difficult to conceive how this state of things can be improved by the formation of a Dental Board, as you describe, from a promiscuous meeting, including the assistant dental surgeons and house surgeon of the hospital; more especially as the chairman and representative on the Council chosen by this Board has recently resigned his connection with the hospital.

The appointment of a dental tutor to supplement the instruction given at Queen's College should prove decidedly valuable to students, and it is to be hoped that ere long this may be made a salaried post.

I am, yours faithfully,

FRANK E. HUXLEY,

*Chairman of the Surgical Committee of the
Birmingham Dental Hospital.*

Oxygen Gas and Nitrous Oxide.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—I learn that there are several dentists in Germany who are using oxygen gas in conjunction with nitrous oxide for producing anæsthesia. Can any of your readers inform me whether the mixture has been employed by our anæsthetists in this country, and if so, with what results? What proportion of each is found the most effective?

Yours, &c., J. H.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their subscriptions were due in JANUARY last and are requested either to remit them direct to the Treasurer, at 40, Leicester Square, or if more convenient, to pay them through their bankers, or through the agency of one of the Dental Depots, and so save unnecessary postage, &c., in applying for the same.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. 10.

OCTOBER 15, 1887.

VOL. VIII.

Dental Appointments at General Hospitals.

THAT increased respect begets an enlarged sense of duty is usually true in the case of individuals; it is universally so in the case of associations of men which have some honourable purpose for their object. Hence it comes to pass that one—and by no means the least—of the advantages which result from raising the status of a profession is the awakening the minds of its members to a keener sense of the duties which appertain thereto. The effect therefore of the recognition of dentistry as a branch of medical science could not fail to be the strengthening of a desire among the members of the profession for an enlargement of the scope of its benevolent action. This desire has already found several happy expressions. The latest of all takes the very natural form of an effort to bring the

utmost benefits of dental skill and knowledge within reach of those who are not in a position to secure it by payment. The proposal to appoint dental officers to all general hospitals may be open to some objections and beset with many difficulties, but so much at least as this is clear; the proposal itself, which is nothing more than the further development of a practise that has for some years been followed in a limited number of instances, notably in certain metropolitan hospitals, is only a natural outcome of the upward progress of the last few years.

Apart from some practical obstacles which we do not propose to touch upon in this article, the only question involved in certain recent suggestions with which our readers are familiar seems to be this. Are these proposals reasonable in character and do the sacrifices which they involve come within that modest range of duties, which a well-informed profession has a right in its corporate capacity to impose on its individual members?

All gratuitous service, by whatever body of men performed, involves self-denial, and it ought in justice to be limited to such service as has one distinctive feature: that it is in its nature essential to the recipients. So long as the public conscience regarded education in much the same light as Caxton in his brave old world simplicity regarded a book "as a thing not for a rude uplandish man to labour therein, but only for a clerk and noble gentleman," it would have been as impossible as unjust to ask the schoolmaster to put up with personal loss in the interest of popular instruction. When however learning came to be regarded as an universal need, then the sacrifice which was forced on many a teacher, by reason of its gratuitous provision was such an one as no honourable body of men with faith in the dignity of their calling could refuse to make. To come nearer home, we find that medical men, recognising that

their service is of a nature imperative to the common welfare, have ever placed it (under proper safeguards) within the reach of the poor. Nor have they ever been niggardly in their application of the principle of free service, preferring to suffer occasional injustice at the hand of "meanness" rather than that want should suffer through too severe a judgment, or be galled by action too painfully inquisitorial.

Applying the same law to our calling how stands the matter? Are dental services essential at all? If so, are they essential in their completeness; or are they only so up to a certain point long since recognised and typified by a pair of forceps? If only in the limited sense, then clearly duty ends with the gratuitous extraction of teeth. Only in that case dentistry has put forth a claim for recognition which had no sufficient basis, for it is on the value and high character of *all* its skill and knowledge that its right to rank as a branch of surgery rests.

It may, however, be allowed that heroics are all very well, and that high ideals like mountain breezes are apt to leave men hungry. The consideration that, in the opinion of some at least, efficient dental services at hospitals would involve a very large sacrifice on the part of individual dentists is entitled to respectful attention. Reference is not here made to the time which the appointed officers must give. That is a detail not without difficulty but capable of adjustment. Reference is rather to the pecuniary loss which many men might experience, through the doing for nothing work which in a proportion of cases would probably otherwise be paid for. While making due allowance for this it ought to be borne in mind that there would at least be certain compensations. Of the salaried appointments, which would probably result from the carrying out of the scheme, we say little, because they might

not as a rule fall where the loss was chiefly felt. There remains, however, a large element of gain, of which every practitioner would have his share, and the younger men might in this instance look for an elder brother's portion. The mere fact that extended attention and care was being bestowed on the teeth of the poor must awaken the class above to a sense of the importance of such care to themselves and their families. If the mistress of a moderate household found her servant enjoying the benefit of careful and skilful dental treatment she would for very shame see that her own children had the like benefits, and there is ample room for such happy levelling up. Between the wealthy who now pay attention to this matter and the poor, there lies a world of foolish folk who value their organs of mastication strictly according to their position. On those which have the distinction of occupying a forward position in the dental arch, a little attention must be bestowed, and if they are wanting art must supply the deficiency of nature. But as regards those less fortunately placed, well, in their case pain is the arbiter of their fate. The feeling is much akin to that which prompted the old Saxon law, by which a man who knocked out his neighbour's central incisor was required to pay a fine of six shillings, while if it chanced to be a canine it was but five, and for losses further out of sight than that four shillings was voted enough.

To the plea that gratuitous services are demoralizing to the recipients we attach no great importance. As applied to mere almsgiving it is just enough ; but as affecting the few services by which the poor are permanently benefited it does not appear to have much force. Indeed, a cynic might often smile if not at the proposition, at least at the mode of its presentation. We remember hearing a gentleman grow eloquent on the demoralizing effect of giving

instruction to the poor without payment, happily oblivious of the fact that his son beside him wore the livery of the Blue Coat School. We do not imagine that this gentleman was demoralized by this little favour of fortune which saved his purse. The truth seems to be that most persons have, at one time or another, some unearned assistance of which they gladly avail themselves, without loss of self-respect. If here or there one who might by a more than athlete's severity of training, pay for a dental service have the luck to get it for nought, we do not think it a serious matter, nor greatly grudge him the ghost of a luxury on which he may spend the fee which ought to have found its way into the dentist's pocket. Serious misuse of charity is in this as in every case to be guarded against, but having taken such precautions as time may allow, and the wit of man devise, we should go on with our beneficent work, consoling ourselves with the moral of the old clerk's couplet :—

Red ink for ornament, black for use,
The best of things are open to abuse.

Dental services are of two kinds, and there is a marked distinction between them. On the subject of supplying artificial dentures to the poor, we do not propose to touch ; there are clearly difficulties in the way of so doing, which do not appertain to operations performed with a view to the preservation of the natural teeth. Further, there is only a certain proportion of cases in which such provision would come within the principle we have laid down for all free service, that it shall be absolutely essential to the recipient. We may put this on one side, however, as at any rate not ripe for discussion. With this reservation, we conclude that the nature of our claim to rank as part of the medical profession, presupposes that the services we are able to render are of vital consequence to the general well being. That they ought therefore to be brought

within the reach of all, and that, not in the old destructive sense of ridding of pain, but in that conservative application of them, which it has been the privilege of this generation of dentists to develop. Thorough in character, in application universal.

ASSOCIATION INTELLIGENCE.

Midland Counties Branch.

AN informal meeting of members of the branch, and members of the British Dental Association in the Northern Counties, will be held at the Castle Hill House, Lancaster, on Saturday, October 22nd, at six o'clock, the President, F. BULLIN, Esq., J.P., in the Chair. The Secretary will make an important statement in regard to the revision of the Dentist's Register. He will also offer a few remarks on "The Constitution of the British Dental Association."

A substantial tea will be provided specially at the Coffee Tavern Corn Market Street, off King Street, two shillings each. Tea will be ready at five o'clock.

W. H. WAITE, *Hon. Secretary.*

Annual General Meeting (*continued*).

Thursday, August 18th.

After the presidential address had been delivered, the meeting proceeded to listen to and discuss the various papers.

Mr. SMALE read a paper by Mr. WALTER CAMPBELL, of Dundee, "On Water Supply and Pressure, with reference to the Hastie Motor."

Mr. PRESIDENT AND GENTLEMEN.—Our Hon. Secretary readily gave me permission to make this communication with reference to the water pressure and supply of the towns in the United Kingdom. I was led to make this request on reading the annotations of our Editor in the last number of our Journal. With reference to the Hastie Motor, he says "However ingeniously a hydraulic engine may be constructed, the continuous and plentiful supply of water will ever be the primary condition of suc-

cess. In this particular the city of Glasgow is especially favoured, its water supply from Loch Katerine being not only continuous, but of sufficient pressure to afford a very strong power, even at the top of the highest tenements." Believing that the Editor was giving expression to the prevailing, but erroneous opinion, with regard to water pressure and supply in the various towns, it occurred to me that I would be doing a service to those members who might be contemplating the introduction of water power into their surgeries, by collecting and bringing before them statistics, showing the supply and pressure in the leading towns of the United Kingdom. Before reading these, however, you will permit me to give you the results of my experience since November last, as to what I consider the simplest and best way of fitting up and working the motor in combination with the dental engine.

In a short paper I read before the Odonto-Chirurgical Society in March last, and which appeared in our Journal for April, I compared the Hastie Engine with other motors known to me, with the result that, to my thinking, the Hastie was incomparably more efficient and less costly in working than any others, and the experience I have since gained has confirmed all that I then said. I have had considerable correspondence with members since my communication appeared in our Journal. Several of these gentlemen have been waiting patiently for diagrams which I promised to send as soon as the Messrs. Hastie were prepared to supply motors to the profession. The latter gentlemen, however, have made no haste in this matter. I believe they purposely delayed making them in numbers until they were thoroughly convinced, after some working experience, that their motor was suitable for dental purposes. One or two, however, were early supplied with the motors, as an additional means of testing their usefulness in this direction.

Mr. McLeod, of Edinburgh, kept the motor I showed at the Edinburgh meeting in March. He fitted it up in exactly the same manner as my own and has been working with it constantly since then. Mr. Brownlie, our esteemed President, also came to Dundee to see the motor at work. He examined and tested its working power, and felt satisfied that this motor was the most perfect for our work known to him. He was not, however, quite satisfied with my method of starting and stopping the motor. Having procured one for himself, he set to work to devise a method of working both motor and dental engine more to his own

mind. I need say little as to the comparative merits of either, as you will have an opportunity of examining both at work and judging for yourselves. Mr. Brownlie has generously offered to show his method of working the motor and dental appliance. I am sure our President will not feel offended when I say that, to my thinking, his method does not give a correct idea of the perfect control the dental operator can have over its speed, and in this, to me at least, lies its great merit. Mr. Brownlie's method, I may state in a sentence, is to start the motor with one button, and to have three different rates of speed, pushed from slow to fast with this starting button, but to bring the motor from fast to slow, he must use another button to stop the motor and start again to slow; whereas, my plan of working is to have one or two, or three (if anyone wished to have this wide range), but for each button to have perfect control of the motor, independent of the others. Believing, as I do, that my way of working the motor is superior to Mr. Brownlie's, I have got a motor fitted up with upright rod and all-round joint, connecting White's ratchet and flexible arm, as I have them at work in my surgery. This arrangement Messrs. Ash will be pleased to show at their table, at the Dental Hospital, in George Square. I may explain that I have got this motor and dental appliance into the narrowest working compass, for the purpose of showing the members present the easy working and perfect control one can have over its speed, and for the International Medical Congress at Washington, where I also intend to show it.

I need scarcely state that the button or buttons for starting, and regulating the speed can be placed in any position round the operating chair, that may be desired, and I may add that there is scarcely any limit to the locality for fixing the motor. When it can be made available, however, I consider the room below the surgery to be the simplest. In working, the oscillating cylinders are not altogether free from noise. This, however, is reduced to a minimum, when a rubber washer, about a quarter of an inch in thickness, is placed above and below each screw, used for fixing purposes.

Another method of working, and I think a very good one, when the room below cannot be used, is to have the motor fixed between the joists close to the wall, with a cord running from the motor up to a wall bracket. I have got a telescopic bracket made for my friend, Mr. Matthew, of Edinburgh, to be worked by a motor

fixed between the joists and the floor, the motor to be fixed in an iron box and let into the floor, with a lid to open and shut for oiling purposes. If practicable, this bracket arrangement will be shown at work at the Dental Hospital by the Messrs. Ash.

I believe that a motor of one kind or another will be used sooner or later by all dental surgeons, and by many as soon as they can see a really efficient one. The maximum cost of working the Hastie Motor will be, as far as I can judge, one guinea per annum. This should be the maximum, and is what I and others pay in Dundee. In Glasgow, where the price of water is just one-half of what it is in Dundee, we might expect the cost would be a half, and I understand from Mr. Brownlie that the charge for his motor is 10s. 6d. per annum.

I am led to believe, on the authority of Mr. Watson, engineer of the Dundee Water Works, that the Hastie is the only motor which regulates the consumption of water in accordance with the work required to be done. This, I have no doubt, is well-known to all engineers of water works, and they will readily allow the motor to be run at this nominal price of from 10s. 6d. to £1 1s. per annum.

This motor, I have no doubt, will also in time be largely used in dental workrooms. It is already in use, and rendering splendid service in one workroom, viz., Mr. Walker's of Dundee, running two lathes with ease.

Other engines might be used in the workroom, such as gas or hot air. I have seen a gas engine used in this way, but from some cause the atmosphere was not of the sweetest, the presence of coal gas being very perceptible.

Now, gentlemen, with reference to water pressure and supply in the various towns, I regret to say that some of the engineers have not yet replied to my queries. The members, however, will see that Glasgow is by no means so specially favoured as some, I know, have thought. Some engineers have returned their pressure by pounds, others by feet, I give them as they have been returned. It is almost needless to remark that every two feet gives one pound of pressure.

Town.	SUPPLY.								PRESSURE. Maximum and Minimum.
	Constant or Intermittent.								
Aberdeen	Constant	...	...	...	270-50ft.
Arbroath	Constant	...	...	...	100-10ft.
Ayr	Constant	...	...	...	100-50ft.
Barnsley	Constant	...	...	...	160-20lbs.

Town.	SUPPLY.						PRESSURE.	
	Constant or Intermittent.						Maximum and Minimum.	
Bath	Intermittent	...	...	290-50ft.
Belfast	Intermittent	...	...	70-10lbs.
Birkenhead	Chiefly Constant	...	...	100-50ft.
Birmingham	Constant	...	...	120-40lbs.
Blackburn	Constant	...	...	100-10lbs.
Bolton	Constant	...	...	130-12lbs.
Bradford	Constant	...	...	600ft.
Brighton	Constant and Intermittent	...	...	140-60ft.
Brompton	Constant	...	...	90lbs.
Bury	Constant	...	...	85-30lbs.
Cambridge	Constant	...	...	80-50lbs.
Cardiff	Constant	...	...	80ft.
Carlisle	Constant	...	...	80-30ft.
Cheltenham...	Intermittent	...	...	230-100ft.
Chester	Constant and Intermittent	...	...	120-35ft.
Coventry	Constant	...	...	60-40lbs.
Croydon	Constant	...	...	300-30ft.
Derby	Constant	...	...	225-70ft.
Dublin	Constant	...	...	250-100ft.
Dumfries	Constant	...	...	65-40lbs.
Durham	Constant	...	...	230ft.
Edinburgh	Nearly Constant	...	...	190-47ft.
Exeter	Constant	...	...	110-27lbs.
Glasgow	Constant	...	...	95-70lbs.
Greenock	Constant	...	...	300-80ft.
Halifax	Constant	...	...	120-85lbs.
Huddersfield	Intermittent	...	...	300-50ft.
Hull...	Constant	...	...	150-50ft.
Inverness	Constant	...	...	95ft.
Kilmarnock	Constant	...	...	120-60ft.
Leamington...	Constant	...	...	58-27lbs.
Leeds	Constant	...	...	180-10lbs.
Leicester	Constant	...	...	200-50ft.
Liverpool	Intermittent	...	...	80-25lbs.
East London Water Works Co., Old Ford...	Constant	...	...	40ft.
Chelsea Water Works Co., Pimlico, S.W.	Partly Constant	...	...	140-60ft.
Southwark and Vauxhall Water Co.	Mostly Constant	...	...	300-30ft.
Kent Water Works, Deptford, S.E.	About half is Constant	...	...	500ft.
Grand Junction Water Works Co., Notting Hill, W.	Two-thirds Constant	...	...	120-80ft.
Lambeth Water Works, Brixton Hill, S.W.	Half is Constant	...	...	80-60ft.
New River Office, E.C.	Constant and Intermittent	...	...	7cft.
West Middlesex Water Works, Hammersmith, W.	One-third Constant	...	...	170-100ft.
Manchester	Constant	...	...	400-125ft.
Merthyr Tydvil	Constant	...	...	220-20ft.
Newcastle	Constant	...	...	385-50ft.
Norwich	Constant	...	...	150ft.
Nottingham...	Constant	...	...	300-30ft.
Preston	Constant	...	...	34-22lbs.
Plymouth	Constant	...	...	60-20lbs.
Portsmouth	Constant	...	...	160ft.
Scarborough	Constant	...	...	150-35ft.
Southampton	Constant	...	...	70-15lbs.

Town.	SUPPLY.							PRESSURE.
	Constant or Intermittent.							Maximum and Minimum.
Southport	Constant	...	...	240ft.
Stafford	Partly Constant	...	...	300-10ft.
Swansea	Constant and Intermittent	...	...	300-10ft.
Wolverhampton	Constant	...	...	110lbs.
York...	Constant	...	...	30-15lbs.

The PRESIDENT, in response to a request that he would give the meeting the result of his experience, said he saw no occasion to make any modification in his already published remarks on the water motor. He expressed regret that the water arrangements at the Dental Hospital did not afford the pressure they had expected, in consequence of which the engine worked with a little uncertainty. In answer to an inquiry as to which side of the chair the motor was placed, the President said: "On no side. It is a wall bracket, and swings out from the wall and travels with the hand in altering your position. It admits of a very extended range of motion, and moves so freely that there is no weight whatever in altering the position. The floor is kept perfectly clear, and there is nothing but the stopping and starting arrangement on the floor, which does not interfere with one's freedom in any way."

Dr. STACK said that the value of such an apparatus as this in our dental surgeries depended greatly on the practical success of it. He had tried various motors and had, he regretted to say, abandoned them, but would hail with the greatest satisfaction a motor to which he could give a long lease in his dental surgery. It was impossible to discuss the merits of the particular motor before them without having an opportunity of practical observation of the machine, and he would suggest that, if it was at all possible, before the discussion of Mr. Campbell's paper came on, the members should in some way or other be afforded an opportunity of seeing the practical merits of this machine.

The PRESIDENT: There are two at 10, Brandon Place, and at the Dental Hospital, where the motors may be seen at work. I quite appreciate the suggestion, because it is a thing that you should see in action before you can appreciate what it is. If no other gentleman wishes to say anything further on this point, we may hold the discussion as adjourned.

Mr. SMITH TURNER: With your permission, I think some one might tell us about the amount of pressure that is required. After all, we may be all agreed as to the admirable arrangement of the

engine, and the facility with which the hand piece can be guided in any direction by a swing bracket or anything of the kind; but the great thing is the source of power. How, for instance, would we be situated in London, where the water is turned off periodically, and we have nothing but perhaps a single cistern to supply us with water? We may have a cistern at the top of the house, but the cistern would very soon be exhausted, and what are we to do then? Mr. Campbell seems to think that Glasgow is not so favourably circumstanced as some people imagine. I think it is peculiarly favourably circumstanced in respect of the supply of water. You have, I believe, a continuous supply here. Now, we have an intermittent or remittent supply in London, and it seems to me that the water motor in that city is a thing of the future until the Water Companies can be converted to the continuous supply system.

Mr. BROWNE-MASON: I think you will find most towns in the same case. In Exeter we are supposed to have a continuous supply, but during the last six weeks we have had a very intermittent supply, with many apologies from the Town Council, stating that they would give us a continuous supply, but that we are exhausting the River Exe.

Mr. PEARSALL (Dublin): Some years ago I purchased a water motor, made by White & Co. It was a simple thing with two vulcanite wheels. But, in Dublin, when anybody opened a tap in the house, the machine practically stopped and the amount of centrifugal force was valueless for an engine, but immediately the tap was stopped I was able to work it satisfactorily. I gave it up completely, because it was apt to get frozen, and you might be in a most important part of the cavity and be left with it standing. I see here that the Dublin pressure is put down at 250 pounds at 100 feet, and I am inclined to think that that is exaggerated. I learn from enquiry that pressure is 75 to 80 feet. If it would work with a 70 feet pressure, or even down to 30 feet, we could use it with the greatest ease and be very glad of it; it would be very advantageous to have enormous power at the touching of a button.

Mr. BIGGS (Glasgow): I would suggest that members reserve their criticism till they have seen it at work, and I am sure that few gentlemen would believe the small quantity of water that is necessary. To-morrow it will be in full operation at the Dental Hospital.

Mr. WALKER (Dundee) : I have had a motor working for six weeks and I find it very handy. I think there will be a few towns where it will not be of service. We have a good supply in Dundee, and other towns, I venture to say, will have quite enough of pressure at least for the operating room. My surgery is on the second floor, and there I find enough pressure, but I cannot give the statistics in Dundee at that height.

After a few words from Dr. STACK the further discussion of the subject was postponed until the gentlemen had had an opportunity of seeing the practical working of the apparatus.

The PRESIDENT : It was proposed by Mr. Cumming to give a demonstration on his new method of "Continuous Gum Work" with any form and make of tooth, but I have to explain that after consideration he thought it better to give a paper on the subject, as we were all familiar with the firing process, and there was no necessity for carrying out this portion of the procedure. Mr. Cumming has written a paper on the subject and I call upon him to read it.

Mr. CUMMING then read his paper as follows :—

Continuous Gum Work, with any Form and Make of Tooth.

Mr. PRESIDENT AND GENTLEMEN,—I desire to call your attention to what I think is an improvement in a process in the mechanical branch of our profession.

Most of you have seen, and some have tried the Verrier process of producing continuous gum facings. Probably all will admit that there is considerable difficulty and uncertainty in producing a satisfactory piece of work of this kind by the present process. First of all, a particular kind of tooth must be used. Second, when the work is finished there is considerable warpage, sometimes entirely spoiling your articulation. Third, the teeth get fused and made unsightly on the surface, from being exposed to the great heat required to fuse the gum-facing. Fourth, there is the tendency of the facing to crack, even when the piece is being worn in the mouth, and without any apparent cause.

The improvements I have been working out will certainly do away with the first three defects mentioned, and to a *great extent*, if not entirely, with the fourth and last defect mentioned. This process, with all these defects, was a step in advance, and worthily, Verrier's name was attached to it. But for this process, and the

trial of it, and the failures to produce for myself satisfactory results with it, I would not have the honour to lay my improvements before you. You will, perhaps, then excuse me, if I venture to call them the Cumming Method of producing Mineral Gum Facings, with any form of tooth. I may mention here, that it is not a process that can be successfully accomplished by a lad of a year's experience in a workroom. At the same time, any difficulties there may be, can easily be overcome by a trained mechanical dentist.

I have nothing new to relate with regard to the firing or baking, unless this be new, that I never trust to the "*look*" of the piece with the eye, in a glaring furnace—I invariably use a test-rod. If firing the "body," I put a bit of it on the rod, and the moment I find this test-bit (looking at it outside the furnace and below red heat) just to the baked and unglazed condition, I instantly turn off gas, and slip the rubber air-tube from the burner, and allow the furnace to cool gradually below 200°F., before taking off the covering from the face of the muffle. When baking the gum enamel, I go through the same process with even more care, for it is here it will tell, and just as the test-piece gets glazed slightly, I cut off the heat supply as before. By attention to these details in furnacing, you will be rewarded by certain and uniformly favourable results. There is therefore no necessity for a furnace demonstration.

With the aid of a few models, and what I may call a skeleton or two of the work in different stages of progress, I hope to make the process plainly understood by all.

First of all then, you are supposed to have modelled up your work with wax—it may be a full set, or only a few teeth. Fit the same in the mouth to see that it represents nature there. It is then taken to the workroom, and placed on any form of articulator you are in the habit of using. Bites are taken, exactly as you see on this model (handed round.)

This is the first stage, and gives and secures the exact height and position you desire the teeth to have in the mouth when the work is finished.

The second stage is represented in the upper model. The teeth being held in position by the wax at their necks, and the plaster at the cutting and grinding surfaces. The wax contour is equally cut away, just as much as to allow a thin platina plate, and the gum-facing to be added, so as to represent the contour the set

had when fitted in the mouth at first. The teeth are then carefully taken from their position at this, the third stage, so that each will leave its distinct mark or impression of the neck or base, on the wax. The model in this state, with the wax upon it, is so arranged that a casting can be taken of the front gum, and a platina plate struck, exactly like the accompanying silver plate, which you can put into position on the model and wax, and so fully understand this stage. The teeth are now replaced with a slight wax attachment, exactly into position. To accomplish this they each may require a little fine fitting at the lathe with a fine corundum wheel, so as to sit on the platina as they did on the wax.

To prevent them being raised the thickness of the platina, I sink each the thickness of my nail into the wax before I take the casting, but with all that, a point or two will require fitting as I have said. When that is done take off the teeth and plate, and roughen the plate on both sides slightly, as you see this. Then boil teeth and plate to free them from grease. Before replacing the plate rub the surface of the wax with French chalk, so that the plate will be easily separated from it for the firing or baking. Rub the necks and base of the teeth with French chalk also, as this, in my experience makes the lifting off process easier, which I shall explain immediately. Lightly refix the teeth in position, and then work in, with spatula and brush, your gum-body till you have brought it to the contour your wax had. You then lift the teeth carefully off, one by one, from the platina and gum-body sockets; and if the body be a proper dampness the teeth will leave it pretty clean, and without sinking or altering the imprints of the necks of the teeth. The plate, with the body on it, is now gently forced or raised from position with the end of your spatula, and caught with the hand as it slides off in such a manner as will not injure the form of the body. In this condition it is ready to be baked. No plaster nor asbestos is required. They invariably cause shrinkage or warpage. All that is required is a good platina stage, upon which it is at once to be laid. A platina rod or two is required, like this; I find one does well. It is laid across, from socket of second molar to socket of second molar on opposite side, and if a second be needed place it across from first bicuspid to first bicuspid. The rods must have a notch on each end, with the points that must lie on the platina socket a little longer than the lower points, so that it cannot fall through

when all is in a state of expansion. The rods I make in the way you see, so that they may fit any width by shifting the screw. I left the piece on the stage. Put now the rod or rods on so that the notch in the rod will rest on the inner edge of the plate, and so secure it from shrinking when cooling. Put your stage with its contents in the muffle carefully and bake. When cool you will find it will go to position as perfectly as before baking. If the body is well put on you will find one baking only required. If it be cracked another baking of course is required. I may say here the time I take to bake the body is from eleven to twelve minutes. For gum enamel from fourteen to fifteen minutes. That is for Allen's materials. Your work then has been baked and replaced on model. The teeth may (?) require a little fitting in the manner described to get well into their sockets, in which they will resemble a natural tooth in the dry socket of a jaw, as the body will have slightly shrunk. The facing and teeth are again cleansed from grease and replaced, but rub the necks of the teeth as before with French chalk. The gum enamel is then carefully put on with spatula and brush until you have the contour you desire. Then take off the teeth with the same care as before. Place the facing on the stage, put on the supporting rods and bake. When it comes out, if the colour of gum is not as deep as you require paint on a little more and bake again. Put now the finished facing in its position, lay in the teeth, and they should fit as this (handed round). The teeth here have not been touched with a corundum wheel or anything, neither for the body nor gum enamel. You have now simply to model up the piece in the palate with wax, giving it the form you desire, and when this is done lift all off the model and put it on your duplicate. Flask and pack with care, and vulcanize, and finish. I may say there is not much fear of the facing coming out of the vulcanizer cracked, unless the packing and screwing down has been very carelessly done. If all be done with care the result will be as you see in those finished specimens, or even more like nature.

You will see that this process of facing can as easily be added to a gold base plate as to vulcanite. I have earnestly tried to make my process plain and easily grasped by all, and I hope I have succeeded. I shall now mention its advantages in detail.

In the present process the teeth being all fused to the gum-facing and frequently one to the other also, the piece is too rigid,

and in occlusions of the jaw make a harsh unnatural noise, whereas, with my method, the teeth rest entirely on a soft base as it were, and consequently emit a softer and more natural sound, and if we set the teeth slightly apart, which can easily be done in my process, then the improvement in this respect is much greater. Some may say that these spaces will fill with food and look unsightly. They will fill with food, but if they remain so for long after a meal, it is the fault of the wearer, as spaces between the natural teeth would fill also. Then again, a tooth will break by accident. In the old process (may I call it?) of fusing, it is a most formidable job to make an efficient repair, whereas, in my process, it is as easy as to replace a tooth on a vulcanite set. To prove this, in the large lower completed set before you, a tooth was cut entirely off and put back by re-vulcanizing. I do not know if anyone here will find out where the repair has been made. Then again—in the Verrier and other processes, a certain kind of tooth could only be used, whereas (as you will see from the different kinds of teeth on the large upper and lower set) any form and make of tooth can be used. If I had had time I would have shown that even natural teeth could be used, for those who have the taste for them.

Now, when all this can be done without the use of pure gold as a solder—plaster of Paris and asbestos as a strengthener when the facing is in the fire, and the teeth lying securely on your bench, waiting to leap, as it were, into their sockets, free and untouched by the fire that has consumed so many, surely you will agree that this should be the coming process of continuous gum-facing. There are one or two points of interest I almost forgot to mention. The smaller upper and lower set you see is made from the mouth of a lady about twenty-six years. The platina and gum-facing together weigh respectively 4 dwt., 22 grs. ; 4 dwt. 12 grs. The facing of the larger upper and lower set weigh respectively 5 dwts. 8 grs. ; 4 dwt. 1 gr. I desired to make this facing on this set somewhat paler than on the other, so as to represent the appearance of a person's gum of sixty years. Anxious to try a new gum facing prepared by Messrs. Ash & Sons, and which they kindly sent me for trial in its present imperfect but uncompleted state,—the upper set is a fair representation of a pale gum—I had to make a new mix for the lower, but it has not come out the same colour as the upper. If they make it marketable, it has one great advantage over Allen's, it fuses about the melting point of pure

gold, and can be baked, as you set it in from seven to eight minutes.

Dr. STACK commended the energy displayed in Mr. Cumming's work and said that it would stimulate him to further investigation in the same direction.

Mr. SHILLINGLAW : Do I understand Mr. Cumming aright to say that he does not bake the tooth in baking the facing ?

Mr. CUMMING : No, they are not touched with the fire at all.

Mr. SHILLINGLAW : Then I think we shall be able to use material at a lower temperature, and it will be a very great advantage to us.

Mr. BIGGS stated that after a considerable experience he had been very favourably impressed with Mr. Cumming's method.

Mr. BRUNTON : It is certainly a step in advance, being able to bake without so much heat. There is one question I would like to ask Mr. Cumming about the vulcanising of the rubber. Does he find that the pressure in the flask cracks the gum facing, or does he use a flask at all.

Mr. CUMMING : I use a flask, but I may say that the pressure after baking and screwing down the rubber has practically no effect in cracking the gum facing. If the material gets too much of a glaze upon it you will find that when your piece is done it will crack the same as others have done before, and you will find a crack on it, but it will not come off the platinum base, and a few cracks do not matter and when wet are not seen, but the facing is just caught at the very instant when your test piece is right, and then there is little or no tendency to crack. The piece I showed with those perforated holes must not have a great pressure ; but, unfortunately, I allowed it to get too hot, and when I took it out there was a peculiar glaze upon it that I know is the forerunner of seeing cracks on it, and the piece, as you see, bears two cracks ; the little piece has not been so much done, I do not think there is a crack on it, and the teeth fit better into the sockets. The teeth go direct into the socket and when you vulcanise all the pressure will not force the vulcanite through the necks of the teeth, and it is easily removed.

Mr. ROSS WATT : Does Mr. Cumming find whether the gum is at all liable to be broken in use, by the patient allowing it to fall ?

Mr. CUMMING : I have allowed a piece to fall and I fully expected to find the facing cracked, but there is not a crack upon it. It fell into a basin and the water protected it, but if it were

to fall abruptly on something very hard I have no doubt it would crack quite as readily as the ordinary gum blocks.

Mr. MARTIN SHERWOOD : I don't know that I quite understood Mr. Cumming with regard to the pressing of the rubber into its place. If that has any injury, why not paint the model and then lay it on warm and wax it up, and then there is no necessity for putting any pressure on the face at all, and it will come out quite as strong as this ; I have made several pieces without any wax.

Mr. FINLAYSON : Mr. Cumming deserves the greatest credit for the invention of a gum with the tooth to go in separately, so that any kind of tooth can be used, but evidently the whole of the specimens are under fire as compared with the old process.

Mr. CUMMING : I would like to explain that the process is comparatively new, even with myself, but when I saw that it was workable, I wanted to bring it before the meeting, and I believe great improvements can be made on the process, and not a tooth requires to go into the fire at all. No tooth needs to be destroyed with the baking or furnacing.

[Just before going to press, we learn from Mr. Cumming that since reading his paper, he has been fortunate enough to fall upon a process that will entirely, he thinks, prevent the fourth defect alluded to, namely, cracking, *unless by mechanical force*. He is not prepared, however, to make the process known at present, as it is not quite complete.]

Mr. GORDON JONES then read his paper on

A More Efficient Method of conferring Dental Appointments.

MR. PRESIDENT AND GENTLEMEN,—The subject on which I propose to address a few words to you now was dealt with by me at our last Annual Meeting, but I feel sure its importance is so great that I need offer no apology for once more calling your attention to it. My object is to throw out a few suggestions as briefly as possible, and to invite a full and ample discussion. I think that by so doing I shall be consulting the convenience of this assembly far more effectually and usefully, than by reading to you a long and exhaustive disquisition, following out the subject in all its ramifications. To my mind, what is of importance in these discussions, is to direct the whole force of our attention on two or three proposals, rather than to dissipate our energies in rambling over a vast field of subjects, about which we may differ widely in opinion, and on which, the time at our disposal renders it absolutely impossible to hold any full and fair discussion.

Gentlemen, the point I wish to bring before your attention to-day, is this : It appears to me that appointments, as a rule in provincial towns, are conferred on gentlemen having either the largest practices or the greatest amount of influence ; therefore, does it not seem an error to ask any practitioner to do conscientiously that to which he has not the time to devote. A dental surgeon appointed to a provincial hospital or infirmary, attends for an hour one day in the week—it may be on a Thursday. When he arrives at the infirmary or hospital (as the case may be), he finds a large number of patients waiting to receive professional attendance. The first case that comes under his care is one that the patient says is toothache, he examines the tooth, and finds caries of the crown, perhaps to a very small extent, harbouring food that by its retention decomposes, and is a source of irritation to the patient.

In his own mind a clear case of filling is dictated, but he looks around and sees so many patients waiting, and is cognizant of his private appointments, that, instead of filling the tooth he lays his hand on a suitable pair of forceps and extracts an almost sound tooth. This same patient makes another visit in a few months, goes through the same ordeal and No. 2 tooth is extracted, and this process is gone through till all the teeth are sacrificed to the detriment of the patient's health. Why? Because the dental surgeon has so large a practice that he cannot give (without pecuniary loss) sufficient time, which those poor patients ought to have. What does this mean, gentlemen? It means loss in two ways. Firstly, to dental science in that the vast field of observation which lies ready at hand in the form of numerous patients attending, is not fully utilized, owing to the treating of each case as one of extraction. No practical notice is taken by the dental surgeon of the pathological conditions of each case, hence, that practitioner's mind does not receive sufficient stimulus for furthering the preservative, that is the conservative principle, which ought always to be present in his thoughts. Secondly, does it not seem inhuman to keep a poor sufferer who may be attacked the day after the visit of the dental surgeon till his next visit, because he or she cannot afford to seek proper treatment? In the majority of towns, in which there is an infirmary or hospital, there is sure to be more than one qualified dental surgeon. Why not appoint, if there are six, all of them for different days in the week? Division of labour would benefit the patients, and the dental surgeons, and hence the dental profession. For the status of a

profession depends upon the high standing of its individual members *en masse*, and not the highly talented few. I consider if gentlemen be appointed who cannot devote the time conscientiously to their duties they should resign in favour of younger men, who have the time and the requisite experience for treating efficiently the majority of cases presented to their notice : should however, complicated or very abnormal cases arise, it should be open to them to fall back upon a more experienced practitioner in the form of the consulting dental surgeon, which appointment could be conferred upon the gentleman who resigns his appointment, due to his inability to give sufficient time to the requirements of the patients. No appointment to any public institution should be conferred by the subscribers and medical staff of that institution on any member of this profession resorting to that unprofessional system, of advertising. I proceed to quote a case in which I succeeded in obtaining a withdrawal of an advertisement. A certain practitioner who was appointed dentist to an orphan asylum forwarded a testimonial he received from a clergyman to be inserted with his address, &c., in a monthly periodical, which contained an account of the working, financial condition, &c., of an excellent institution to which I am the honorary dental surgeon. Immediately this came to my notice, I intimated my intention of resigning, failing the removal of the said advertisement. I need hardly tell you, gentlemen, this had the desired effect ; and if each individual member interested himself to benefit and raise the status of his profession, by appealing to the press to discourage these unprofessional advertisements, much good might accrue in this way.

Since the excellent papers were read by Messrs. Cunningham and Fisher, I have had personal and ample proof of the importance of making a knowledge of dentistry a *sine qua non* in the examination of candidates qualifying for appointments in the Army and Navy Medical Service. Three years ago a naval instructor and chaplain to the fleet consulted me in regard to his teeth, I stopped several and fixed an upper and lower denture ; eighteen months after his departure caries attacked one of his teeth to a slight extent. Consulting the surgeon on board for advice, he recommended extraction, and by that operation deprived this gentleman of a very useful organ of mastication. Had this surgeon had some knowledge of dentistry, he could easily have introduced an oxychloride, which would have given relief, and allowed the

patient to retain the tooth until he visited me again. I make this statement regarding the competency of the surgeon in this case, because no excuse could be put forward on the ground of pressure of professional work, it being a well known fact that during a pacific cruise their duties are light. In conclusion, though not holding a medical or surgical qualification myself (although I have almost entirely completed the curriculum for both, and hope soon to possess them), I consider they should in the future be made compulsory for anyone about to practice the speciality of dental surgery, the same as it is with the oculist and aurist. Now, gentlemen, I invite you to discuss these questions.

Mr. GEORGE CUNNINGHAM then read his paper as follows :

The Mechanical Training of the Dental Student.

In the interesting and able paper of the Dean of the London Dental Hospital on "Dental Education," at the meeting of last year, he referred but very briefly to the mechanical training of the dental student; yet, curiously enough, a careful perusal of the subsequent discussion shows that it constitutes the main feature of the debate. This latter fact alone indicates very clearly the importance which this Association attaches to this most essential and fundamental branch of the dentists' training, and I think warrants me in briefly offering a few suggestions on the subject for your consideration.

As Mr. Morton Smale rightly said, "It is impossible to over-rate this mechanical training, and three years is not a day too long to spend in the workshop to learn and master the minutiae of the mechanical art, without a thorough familiarity with which it is impossible to be a good dentist." In his hope, however, that the day is far distant when this pupilage will be abolished, we can only concur on the condition that the pupilage fulfils all our requirements. Does it do so? Numerous references in our journalistic literature to this subject seem to indicate that while the provisions required by the licensing bodies are sufficient, and not to be diminished by one jot or tittle, yet somehow or other the system does not result in adequate success. If we admit, therefore, that matters are unfortunately in this sad condition, it would be difficult to employ our time better than in considering some of the possible causes of this failure, and what measures we may adopt to remedy them.

Mr. Smale pointed out that the hospital career should commence at the expiration of the three years' pupilage. Such a view will be

generally endorsed, but if the special dental hospitals permit their students to let the periods of the mechanical and operative training overlap, our own schools must thereby be contributing either to the impairment of one or other, if not of both, from the sheer impossibility of the student giving adequate attention to each at the same time. Not only so, but this facility gives an undue preference to the dentists practising in the neighbourhood of such schools over their more remote confrères.

From the published statements that the certificate of pupilage is given with great laxity and from the possibility of the instructor's neglect or incompetency, we can easily recognise fruitful sources of many failures. There may perhaps exist certain laboratories where complete and efficient mechanical training can be obtained, but I fear they are few and far between, as it must be admitted, their main object, is commercial rather than educational. I think that if we put aside all questions of self-interest which we may have as instructors, we must admit that the present system of pupilage has its drawbacks as well as its advantages. These drawbacks, even where the instruction is not merely nominal but faithful and intelligent, are so inherent in the very nature of the operations executed in the laboratory of the present day, that it is to this fact we must look for an explanation of a lack of mechanical skill on the part of many of our graduates.

Probably if we discuss the matter with some of the older members of the profession they will dilate on the good old times when a seven years' apprenticeship was the rule rather than the exception, when the conveniences of vulcanite were as yet undiscovered, and when the facilities of the dental dépôt with their supply of ready prepared materials were almost unknown.

No one can dispute that in past times the education of the dental apprentice was indeed a mechanical training. Whatever advantages we as actual practitioners may obtain from the present condition of affairs, the result seems to have been a loss of thoroughness and completeness of the dental laboratory as a school of mechanical training.

Mechanical trades, as a rule, have usually a certain finish and distinctness in themselves, whereas in the dental laboratory we have, as it were, a little bit of this and a little bit of that trade or art applied to our special purposes. The number of the various mechanical trainings, as well as the extent to which these are so utilised, vary with the excellencies, the accomplishments, and

oft times the idiosyncrasies of the practitioner or his principal assistant. The result of all this is, that the dental pupil gets a certain amount of education in the performance of a variety of mechanical operations without obtaining that, which regarded from the view of the so-called mechanical trades, constitutes a complete and thorough mechanical training. To this, in our opinion, may be ascribed the principal cause of failures in our mechanical education, and this naturally leads to a consideration of how we can best remedy its defects.

A contemplation of the present condition of the English mechanic may help us in solving the difficulty. The lack of comprehensiveness in his training, the multiplicity of inventions in the way of time and labour saving machines, and the better education of his foreign rival, have led to a decadence which has at length demanded the attention of the Government of the country to such an extent that a governmental scheme of elementary technological instruction in connection with H.M. Science and Art department, will soon be added to the various other similar institutions already established by our universities and other bodies, such as the City of London Guilds. This manual instruction of the youth will be of great service to parents as well as our profession in giving us some means of testing the value of the "raw material" offered for assimilation as pupils. This would seem to indicate the lines upon which our mechanical training may be made thorough and effective without even necessitating any alteration in the present conditions required by the Medical Council and the licensing bodies.

My main proposal then is that the whole of the time of the dental pupil should not be exclusively passed in the dental laboratory, but that where suitable institutions exist, a tangible part of each day, or even of alternate days, should be spent in attendance at some practical and allied courses of manual technology or in a practical school of mechanics.

The conditions and the actual courses followed must vary according to the various opportunities afforded in the different parts of the kingdom.

I referred last year to the fact that a dental pupil in Cambridge had found it possible not only to follow out his pupilage, but at the same time to take his degree at the University. That his pupilage was a success I have every reason to believe, and that his degree was an honourable one is evidenced by a first-class in his final examination. It is only right to remark that the

degree was an ordinary one, and that it would be impossible, except under very special circumstances, for a student to successfully complete his pupilage and at the same time to take an honor's degree. The gentleman to whom I refer, after passing his previous and general examinations for which no attendance on any special lectures is required, took up political economy as his subject for the special or final examination. Without detracting in any way from the achievements of this gentleman, or from the advantages obtainable from the study of so important and so interesting a subject as political economy, I may be allowed to state that from a professional view the best use had not been made of the opportunities at his disposal in the University. A school of practical mechanics exists, and thanks to the self-denying efforts of Professor Stuart and his able colleague Mr. Lyon, both of them University graduates, this has become widely known for the efficiency and thoroughness of the mechanical training which may be there obtained. I feel quite convinced that any dental student who followed out the course, or parts of the course, in that school coincident with, or antecedent to, his dental pupilage, would be more efficient as a practical dental mechanic than if all his time had been wholly spent in the dental laboratory.

I have drawn up in the form of an appendix to this paper a syllabus showing the training, with specimens of examination papers, and a scheme to prove how he would not only have the benefits to be derived from such a scientific and practical course of training, but further acquire the distinction of a University degree, and thereby contribute largely to raise the profession in the eyes of others.

It is often interesting to notice how one's views strike those outside our profession. In any training that pretends to be a mechanical training you must treat with a great amount of consideration the opinion of experts, and as there is such a thing as a kind of grammar which must be common to all mechanical trades, it may not be uninteresting to hear what such an eminent teacher of practical mechanics as Mr. Lyons says, and to see the encouragement afforded by the authorities in Cambridge, and I have no doubt similarly in other centres.

His letter is as follows :—

Engineering Department, Cambridge University,
August 16th, 1887.

DEAR SIR,—I have read with great interest, your paper on the training of the Dental Student, and I see at once that the same

difficulty has presented itself to you in your own profession which met me in mine, viz., that the defective technical training of students in commercial establishments is due to the fact that these places exist for the purpose of making money and not for training students. Special courses are already arranged in our department to meet the requirements for special students, such as those who intend to emigrate or follow architecture, or law agency work, and I see no reason why it should not be possible to arrange a special course for dental students, which might embrace the making of their own instruments and the principal features of electrical work in addition to the general mechanical principles which are taught practically to all our students. After reading one of your text books on mechanical dentistry, and discussing the question with you, I am of opinion that the experiment which you advocate is a most valuable one and must be successful.

I am, very faithfully yours,

JAMES LYONS,

Superintendent.

G. CUNNINGHAM, Esq., B.A.

I have also consulted one of the examiners in Mechanism and Applied Science of that University, the possessor of a name which will be familiar to you all. This letter is from a son of the celebrated Charles Darwin, who is becoming celebrated as one of the most fertile inventors of the day. Any one who is acquainted with the interior of any physiological laboratory in the world must know the name of the Cambridge Scientific Instrument Company, and many of the instruments found there are due to the invention of Mr. Darwin. When I first broached the question to him, he was rather inclined to be antagonistic; but after mature consideration of the points advanced in this paper he gave them his warmest approval, so that his letter is all the more satisfactory. He says:—

August 17th, 1887.

I have been much interested in your paper, and the suggestion you make, that part of the Dental course of instruction should be spent in the workshops seems to me important. A student who had passed some time in such a workshop as we have in this University would have cultivated the dexterity of his hand in a way that would be advantageous to him both in mechanical work and in operating. This would perhaps be of even greater value than the knowledge he would obtain of the use of tools and machines, and the nature of the materials with which he has to deal. As you know, I have taken some interest in the tools and machines used in the profession, and it seems to me that a dentist should be, among other things, an engineer, and to do this he should have had some experience in a workshop. If this mechanical training came early it would, I think, also have the

advantage of convincing some of the students that they had made a mistake in the choice of their profession ; for if they could not do skilled work on metal when held in a vice, they are hardly likely to be successful in the more difficult operations necessary afterwards. Such mistakes are made in the choice of a profession, and it is well that they should be found out early. I hope you will be successful in advocating this form of training.

Yours very truly,
HORACE DARWIN.

Dr. CUNNINGHAM,
King's Parade, Cambridge.

It has been well remarked by Mr. Huxley and others, that the lectures on mechanical dentistry and dental metallurgy should be taken during the time the student is working at the subject practically, and not as now, during his period of operative dental study. The fitness of this suggestion must be admitted by all, but inasmuch as a very large, if not the major part of dental pupilages are passed in places where facilities for adopting this proper mode of study are not obtainable, it is not universally practicable unless we have some modification of the present system. It might very easily be made practicable by the transfer of the third year of pupilage to a centre where the facilities exist, or what in my opinion would be better, to a dental school and hospital where the training would be both theoretical and practical.

Mr. Smale does not approve of the "open" or American practice of teaching mechanical dentistry at the dental school ; firstly, "because we find enough to do at our schools to teach the operative part of our profession, and, secondly, because the mechanical part cannot be taught in classes as thoroughly, or as well as under the personal supervision of a skilled mechanician." With regard to his first contention, an increase in the staff of teachers would solve that difficulty, and the adoption of the provident system of fees for the appliances as already successfully practised in both German and American dental schools, would effectually dispose of the economic question. With regard to his second objection, I do not think he is aware of the mode of conducting mechanical education in America in the dental schools, otherwise he would not have made the statement that he would be sorry to see the American plan adopted. Passing over my personal experience in the matter, I may refer to the case of a member of this Association, who, after successfully earning his living for some years as a mechanical assistant to the satisfaction of his employers, on

going to an American school, not unnaturally, demurred at the necessity of following all the exercises of the mechanical department, and yet is now ready to admit all the unexpected advantages he derived from that course, and some of which he evidenced at a clinic before this society. In fact, it is not too much to say that the very opposite of Mr. Smale's statement may be maintained, or at any rate his statement modified into this,—that some parts of mechanical dentistry can be taught in classes more thoroughly and better than under the personal supervision of a skilled mechanic. One example may suffice as proof: Under a skilled instructor the class is divided off into two for practice in model taking, each student in his turn, therefore, exercises the double *role* of impression taker and patient. I do not know which experience is the more useful, but they are both excellent. I should like to know how many of those who, having completed their dental pupilage under the English system, are adepts in model-taking in all materials, including plaster of Paris. It is impossible to suppose, except in rare cases, that a dental pupil under ordinary conditions, can acquire such a knowledge of the various methods and appliances used in correcting irregularities of the teeth and in remedying such defects as cleft palate, as may be obtained in a class with practical exercise in applied cases in the mechanical department of a dental school or hospital, under the personal supervision not merely of a skilled mechanic, but of an able instructor who is a specialist in his own department of dentistry.

Mr. Smale holds that a practical examination in the mechanical department should form a part of the ordeal to be passed, before the student obtains his coveted diploma. I trust this Association will cordially support such a proposition, as thereby it will be the sooner carried into force. This proposition, however, seems to me only another very strong reason why the dental student should be furnished with an opportunity of remedying the possible defects and deficiencies of his private pupilage by the proposed optional and public course of one year in a dental hospital and school. Some such arrangement, as I have just indicated, would combine the advantages of the school system with that of the present form of pupilage, and certainly would do much to promote the efficiency of the L.D.S. diploma, which after all must ever be the essential qualification for a competent dental practitioner.

Mr. MORTON SMALE: I feel, gentlemen, almost obliged to rise

first in this discussion, because my name has been brought in so often in connection with the remarks Mr. Cunningham has made. We are all agreed that the more thorough the dental student's training the better ; but we are met with several difficulties. The first one is the overlapping of the mechanical dentistry and the course at the Dental Hospital. The College of Surgeons requires that from the date of registration the student shall have been four years in the acquirement of professional knowledge. How he is to pass those four years the College does not say, except that for three of them he shall have been employed in the details of mechanical dentistry, and for two of them he shall have been attending the Dental Hospital training. Thus they virtually provide for five years. When a student comes to me and says, "The College only wants four years and you point out that I ought to take five," I have to say, "It is possible, if you let the courses overlap, that you can take the diploma in four years." This position I heartily regret, but I cannot help it, and I do not think you will ever get the College of Surgeons to alter it. They think that four years is all they require for a man to get his licentiate ticket for the College of Surgeons and Physicians. They will not, therefore, increase their length of curriculum for the dental student, and without an increase it is absolutely impossible to have thoroughly trained men. With regard to the observations made about science centres and Cambridge degrees, I can only say that nothing would give me greater satisfaction than to see a great central teaching school in London, where students might learn every branch, and I hope the time is not far distant when there will be such a thing ; but I think that attendance thereat must be a purely optional thing. So far as the hospital training is concerned, I think that the two courses on mechanical dentistry given at our school would provide all that the students could require, if they had spent three years previously in their laboratories, and had worked there as they should have done. In addition to this, however, the student in our school is required to make a pivot tooth, and to treat four cases of irregularity in the two years. He also treats cases of cleft palate, under the lecturer, and under the demonstrator of mechanical dentistry recently appointed. Nearly all, therefore, that Mr. Cunningham has referred to is provided at our school in London.

Mr. PEARSALL (Dublin) : As one who has spent some time in examining students, I would like to say a few words. Nothing

has struck me more forcibly than the absolute want of proper mechanical training in a great number of the candidates that I examine. I speak both of young and old men. I have gone so far as requiring men to prepare copper wires, and have asked them to make fastenings for me and put a pin in a plate and tap a tooth. The number of men who were frightened at having to do those ordinary operations was past belief, and I had to make a large allowance for those men's nervousness, but I always succeeded by a courteous manner in making the candidate feel that I wished him to be at his ease, and that I did not want to stick him at all. I had seven years as an apprentice and fourteen as an assistant, and I am perfectly certain that a man who has his fingers trained makes the best dentist. I have heard the statement that we shall have no more mechanical dentists. In Ireland, at any rate, matters are different. There we have to help ourselves very much, and in spite of Mr. Smale, I am prepared to say that we cannot get as good swivels made as we can make ourselves.

Mr. THOMAS GADDES (London): I am quite at one with Dr. Cunningham in the general subject of his paper. I have had a good deal to do with dental students, and I have found in a great many instances few men capable, as far as mechanical dentistry is concerned. A great improvement needs to be made in the teaching of mechanical dentistry, and I think the first stepping stone is with regard to the examining bodies. There are many subjects in the curriculum that the student has to stand up for, on which he is not asked a single question, and the result is that the student altogether ignores the subjects that are so treated by the examining boards. I think the first way to make an improvement is that the examining bodies should make the subject of mechanical dentistry a part of the examination. So far as attending some engineering classes, I can say something of the advantages of such a course. I myself had four or five years' training in practical engineering, and when I went to serve my apprenticeship as a dentist, the training that I had received was of inestimable value to me. Therefore, I say from my own experience, that if opportunities were placed in the way of our dental students receiving some course in a practical engineering shop, it would be a very great advantage, and would tend to raise the mechanical aspect of the profession of dentistry.

Dr. SMITH (Edinburgh): I am one of those old practitioners who remember the time when the mechanical work was paramount

in the education of the dental student, and I entirely concur with those gentlemen who have spoken, inasmuch as the acquirements of the dental assistant in those days, when the old bone work was in use, when we made our own swivels and bolts and springs and many of the instruments, were of a much superior order to what they are at the present time, and I think that it would be a great advantage if mechanical experience of some kind could be imparted to the students. I think that the principles of mechanics ought to be acquired as much as the details of the more technical departments of dental mechanics. I cannot see very well, as Mr. Smale has remarked, how more time could be devoted to mechanical dentistry and the same time given to dental surgery. As regards the examination in mechanical dentistry, I do not know how it could be carried out to any great extent, because we could scarcely ask a man to take an impression and finish off a set of teeth before the examiners, but upon the principles candidates are always examined. I am glad to say that there are very few men who come up to the College of Surgeons in Edinburgh who cannot give good answers to the questions. The questions and answers are kept, and any one is very welcome to see both papers, and if he does not say that the majority of their answers is of a very high order indeed, I will be very much surprised. I am very glad to have an opportunity of making a statement of this kind, because I think it should be known that in Edinburgh the Royal College of Surgeons are most strict in examining on these subjects.

Mr. BIGGS (Glasgow) : With regard to the Faculty of Physicians and Surgeons in Glasgow, the students are examined in all the branches that Dr. Smith and others have referred to, materia medica, medicine, chemistry, mechanical dentistry and metallurgy. I am sure that it is quite a wonder to us all that these have not had examiners in the L.D.S. of England.

Mr. CUNNINGHAM : Mr. President, there is no statement of that kind. I was speaking of the distinction between an oral examination of mechanical dentistry and a practical examination.

Mr. BIGGS : It is both oral and mechanical in Edinburgh and Glasgow. We take the students to the Dental Hospital and cause them to take impressions and models, and fix up sets of teeth on models of vulcanite. We have no time to give them gold work to do, but we see that they know the whole process and how to set up upper and lower models in wax.

Mr. A. WILSON offered some remarks in corroboration of those

made by Dr. Smith, and further suggested that dentists should make it essential that their pupils should be with them for three years in the workshop before entering on their surgical work. He also stated that in Glasgow and Edinburgh the college allowed one year of mechanical dentistry to be taken after the preliminary examination, and that there was no necessity for any overlapping at all.

Mr. FOTHERGILL spoke on the plan followed in the American schools, where a student was given a patient and required to make a vulcanite case for her and show it to the examining surgeon. He expressed a preference for the English system, though he believed the American schools had many advantages.

Mr. SMITH TURNER: I remember working with natural teeth, when mineral teeth were almost a rarity, and having to make my own tools, and I thank Heaven that those days of drudgery are past. I never saw any beauty or utility in them, and I do not think I am any better dentist for having had to go through them. I think that the training of a man who has to practise as a dentist, should be, as Dr. Smith very pointedly remarked, a training upon principle as much as upon detail in dental mechanics, as usually understood, and for this reason I do not think a man working, whatever his knowledge may be of the workroom and of the details of the work, can combine the two. I will ask any one here, if he knows anything about striking up plates and doing the hard work of the dentist's workroom, if he is fit to leave that work and do the delicate manipulation that is now required of us in our surgeries. I say as one who has had no little experience that it is impossible. Not only will his hand be unsteady, but his delicacy of touch will be gone, and he will be unfit for either the one or the other. Now if a man is to conduct a practice, he ought most certainly to know the details of the workroom. He ought to know how things should be done, and in a push he ought to be able to do them, but that he has to keep the two up together or that he is to be trained to that extent of skill, which a mechanical dentist whose place is in the workroom requires, is, I think, out of the question. How he is to get his proper training is a matter which it is very difficult to settle—I mean the dentist who has to go into practice as a dental surgeon. The question of apprenticeship has always been a vexed one, because as has been shown by all speakers you have no control over your apprentices. The system of apprenticeship was done away with in the medical

schools for that very reason, that an apprenticeship was more often a fraud than anything else, so it will be, I believe, in the dental profession as often a fraud as anything else. If the young man, the student, refuses, as Mr. Smale says, to learn to work, the interest of his teacher will very soon flag and he will be glad to get rid of him. With regard to the examination of the College of Surgeons, it is very far from being perfect, but it is about as severe as we can make it. I am afraid if we made it much more severe, the result would be that a great many people would be plucked, and with regard to the examinations that are made elsewhere, my surprise is that anybody ever gets through. This question of teaching dental students a perfect knowledge of dental mechanics will arrive some day at a satisfactory condition. At present it seems we are rather adrift, but I think we must try to particularise a knowledge of principles and make it as limited for practical purposes as we can.

Dr. STACK drew attention to the absence of any mechanical training as a part of general education in this country, and cited the case of Germany where every boy is trained to some mechanical occupation. He also referred to what he considered insufficient attention on the part of dentists to their pupils. With regard to practical examination, he explained that the College in Ireland made it a practice to take the student into the laboratory and make him do some simple mechanical work.

Mr. BRUNTON expressed the opinion that the question of technology and arts was one that would cure itself to a great extent, seeing that technical education was being introduced into many schools, and that school boards were taking it up. He believed it was a question which would belong more to the school than the college.

Mr. CUNNINGHAM: In the course of the discussion a great many questions have been put, but I think it would be a vain effort to answer them all. There are only one or two points which I would notice. I think I was justified in the main object of my paper, which was to show that the mechanical training of the dentist is unsatisfactory. Nobody could have listened to this discussion and still maintained the contrary. What are the causes that have led to that? I have certain views as to that, and Mr. Smith Turner, a very important authority, refers to the good old days of drudgery. They were days of drudgery, because he was kept at one special operation perhaps week after

week. He endorsed what Dr. Smith has said, and from his speech it might be inferred that I never had mentioned the subject, but there is a grammar of mechanics which is as common to engineering as to mechanical dentistry. With regard to the American experience, I am very sorry that I had to mention one word about that, because I know just as well as anyone can do what the weakness of the system is, but it is unfair to touch upon men who dodge, and with regard to these bad students, as Mr. Morton Smale says, we cannot get rid of them. The system should not be judged by them, and I can only say that if Mr. Fothergill had had the opportunity of seeing the same work as I had, he would rather tend to commend the good points of the American system, and I would advocate as a practical change two years of the English system with one year of the American system. Yet that American system is in practical use in the London school and it is not known as such, and, therefore, when he confesses that he has adopted the method which he has condemned, it is the most practical admission I could expect. What we want to have is a system that will make up for the deficiency of the laboratory. With regard to the examination in mechanical dentistry, there are one or two points. I think we have had a good examination in practical dentistry. You may lock a student up in a room and give him as much time as he wants and if the work is stringent it can be done, but it is not necessary to be done. I have an examination paper in an engineering shop, and if you listen to the practical examination that they have, you will be of my opinion that there is not one of the practical questions that it would not be good and useful for a man to possess, who pretended to be a mechanic, which I hope every dentist will. The examination is as follows:--

- (1) Bore the cylindrical gauge and turn the plug to fit it.
- (2) Turn the given piece of steel to $\frac{5}{8}$ in. diameter, and cut a V thread on it 2 in. in length.
- (3) Temper the chisel and turning tool.
- (4) Chip the given block of cast iron to as level a surface as possible.
- (5) Make a box with dove-tailed corners to sketch.
- (6) File up the given hexagon nut.
- (7) Mould the given patterns for an iron casting.

I think if a candidate would get a tool to sharpen, he would find out something to his advantage. Of course there is a com-

prehensive examination, and the time is from nine to one and two to six, and the student has to do what he can, and I think it would be well if a man went through some training that would enable him to pass such an examination as that. I scarcely think that a similar practical examination would be advisable for the mechanical dentist, but we should compel him to do certain parts of the work that would test his knowledge of the whole process. Then another point is this ; you know that there are men practising dentistry to-day, who are better calculated to adorn some other profession, and a training of this kind would enable men to find out whether they were suited for dentistry or not. Mr. Brunton sent me a young man, who had been with him as an improver. After a month I said he had better go, but my brother asked that he should be allowed to remain for another month, and after another month my brother came to me and said that we must put him out of that, and I told him to go back to his former profession as I did not believe he would ever make a good dentist. We ought to prevent these men coming in. One point I want to enforce is a training in those essential elements, not the sort of technology that they get in school. Any man can do it in his own place. In my own case I was trained with wood work and files, and I was not allowed to operate till I made my own instruments. I thought it hard, but I think it is a good training. I think that a mechanical training will be an economy of time, and I only hope and trust that those who have seen the work turned out at Cambridge will appreciate the advantages of the special school. I am not wanting to advocate Cambridge as against any other. I have only wanted to talk about something I was not ignorant of.

A vote of thanks to Mr. Cunningham was moved by Mr. SMITH TURNER and seconded by Mr. GORDON JONES. After which the meeting was adjourned.

In the evening the President and Mrs. Brownlie received the members of the Association and their friends in St. Andrew's Hall, Berkeley Street.

APPOINTMENT.

ARTHUR M. FOX, L.D.S.Eng., has been appointed Dental Surgeon to Dr. Langdon Down's Institution for Imbecility and Epileptics, Hampton Wick ; also to the City and Metropolitan Police Orphanage, Strawberry Hill.

ORIGINAL COMMUNICATIONS.

The Social Influence of the British Dental Association and its Branches.*

BY B. W. HARCOURT.

ALTHOUGH this short contribution to our day's papers will assuredly possess nothing new for your consideration, still the constant assertion of incontrovertible facts, I maintain is not without its usefulness to all of us at times. When our Secretary asked me for a paper for this meeting, he most obligingly at the same time gave me the title of it, so that I hope whatever failure may be my lot in dealing with it, you will kindly let him in for a portion (a good portion) of your condemnation for giving me a work so far beyond my weak powers, and I greatly rejoice at the careful amount of wisdom displayed by our Council, *collectively*, in limiting the time allowed to a few minutes. I think and fervently hope it is only ten.

Now, what are the advantages of the British Dental Association? I think one of primary importance is the inestimable benefit conferred on all its members by the breaking down of that barrier of reserve and stiff-backism that formerly reigned supreme amongst all members of the "forceps" and "scalers" persuasion. Every one now practising our profession, on the sufficiently broad lines of the Association rules, is enabled to meet his co-worker in the bonds of friendly intercourse. If he does not do this it is most certainly his own fault. Before the establishment of the British Dental Association, it was quite the correct thing to live in the same street for twenty years with a brother practitioner, and not be even on speaking terms with him. I will illustrate this by a fact. Some few years since, some noisy nuisance (I will not mention what) had occurred in the street where I had then lived over twenty years, and a neighbour in the morning called a meeting of those immediately near to discuss whether any united action should be taken in the matter. I was one of the first to arrive, and the next after me was a brother practitioner of repute, many years my senior in age and practice. He took his truly Britannic position on the hearth-rug, backing the wintry fire in the most approved fashion. I nodded, and volunteered a "How-d'ye-do."

* Read at the Annual Meeting of the Eastern Counties Branch, July, 1887.

He said, "How-d'ye-do" in a minor key, and then the interesting conversation ended. He didn't know *how I did*, and *I* didn't know *how* he did, and probably we neither of us cared. But any third person, seeing two near neighbours of many years' standing, salute each other in that warm gushing manner, might have had, nay, *must* have had a very poor opinion of the brotherhood existing among the members of the dental profession. Now, that icyness of demeanour, that kind of "don't know you," is entirely done away with by the very planks on which this our Association is based. Every man now practising his profession on the lines of this Association, looks to his fellow as one to whom he is both willing to impart the knowledge he may have, or in his turn to accept the same thankfully from another. A free interchange of thought on all subjects bearing on our common calling, is now both the aim of these meetings, and of the every day life that we lead as members of a liberal profession, and of a large community.

Formerly our position was very much that of strange cats in a limited area ; but now I believe we are well-behaved and decorous members of society and brothers in no ignoble branch of the healing art.

Another benefit resulting from this Association is that London is not now necessarily supposed to monopolise quite all the dental knowledge of these Islands. The "poor countryman" still finds that "*made by a London dentist*," is literally thrown in his teeth in relation to cases of very inferior workmanship that from time to time find their way into his hands. That dreadful London is so very elastic. Any man rejoicing in a dental door plate half-way to Sydenham or down on the Essex marshes, equally claims to be a London practitioner with the residents of Hanover Square or Piccadilly, and has been in the habit of crying down the work of old country dentists of great skill and mechanical ability. Now, these branches of the British Dental Association, bringing together men from London and every part of the Kingdom to our meetings, have, I believe, inculcated a great degree of reserve in giving opinions (frequently unasked for), on the work and treatment of other dentists, when patients have, by change of residence, or other circumstances, come under their hands ; and that in place of the previous almost uniform method of decrying what others had done, the more honourable course is followed of giving credit where credit is due, and not hesitating to speak in terms of approval or commendation of any

work or treatment where such can with truth and honour be given.

Why practitioners (other than advertising men) hold aloof from our Association, I do not know ; but it is very strange that some of our large towns (notably Leicester), with a number of good dentists as there must be to such a heavy population (130,000 or more), should show only *one* of those gentlemen's names on our roll of members. Surely some good valid reason can be assigned for this abstention from our lists.

One of the greatest, nay *the* greatest, preventive to a general acceptance of the British Dental Association, is the universal prevalence of the advertising mania. A dentist who conducts his practice in precisely the same way as other people, using no other means in the manipulation of his appliances, than do the rest of the profession, yet must pose before a too easily gulled public in numerous advertisements, as the whole and sole possessor of some painless method of extraction, or better still, of a plan where no extractions, under any circumstances, are necessary, prior to the putting in of a set of teeth that will last a lifetime—aye, till the day of judgment—what a judgment it must be for such barefaced liars !

Of course, such a method of direct mendacity cannot for one moment be tolerated in a society such as the British Dental Association, and it does become very hard for one of our members, in a small town we will say, to have to contend, in a plain sailing honourable way, with these very *clever* people, who prefer to trade upon the well known gullibility of the public rather than upon the pardonable lines of professional competition. The great Barnum said the “public love to be gulled,” and I believe he was right, and until education has advanced further, and people will think and read too, the astute advertiser will distance his more honourable competitor in the race for competence. Now this Association must aid in educating the public ; the time will not be thrown away, even though men in large practice aid in doing it.

It will surely have occurred to every one here who has been long in practice, that patients have demanded to know how it is that Mr. So-and-So is able to do so very much for so little remuneration, and there is “no pain in what he does.” Ask another question of your interrogators, whether they can tell you of any one they know who has consulted one of these paragons of dental skill (with a mouthful of stumps and bad teeth), and has not had to

suffer something before those perfections of mechanism have been put in their places. All practitioners in large towns are accustomed to see, ever and anon, a big type advertisement in the local papers, heralding the approach of Mr. So and-So, (Dr. So-and-So is the better "catch"), who may be consulted in such a place between certain hours, where all the latest appliances, patents, no pain, no extraction, misfits put right, local failures "entirely rectified," "last a lifetime," and all the old—old lies repeated *ad nauseum*. Huge door plates—sometimes three or four—will surely adorn the house. This shining dental light upon the Cimmerian darkness of the country, always hails "from London." You only say "another quack," and so for some months, possibly a year, your citizens' purse-strings are opened wide. Numerous useless dentures are supplied to the "large plate London loving public," and all goes well *with the operator* till complaints begin to get too noisy and numerous, and one fine morning the complainants find the door posts unadorned with the huge plates. The man from London, Dr. Molar, has left the town or city, for the city's good. If one is at all curious to follow up the career of these gentlemen, you have only to look at the Western papers (suppose you live in the East), or the Southern, if you are in the North, to find that these dental benefactors will be found practising the same old game in the opposite county. When the thing gets too hot, note the change of name, only the point must be made of "*Coming from London.*"

Now I maintain that the British Dental Association must in time go far to kill this pestiferous quack, just as the old Apothecaries and Leeches died out before the spread of education and the demands of the College of Surgeons for a more extended knowledge on the part of those practising surgery. All members of the Association feel that they have individually to maintain the dignity of an honourable profession and will discountenance in every way the spread of charlatanism in those around them, more especially in those who as Pupils will derive their first professional knowledge at their hands. The recognition of the dental profession is now fully established as a branch of the healing art, and it behoves every member most carefully in his own practice to maintain the honour and dignity of the whole body; and in no way can he better further this end than by becoming one of the every day enlarging number of the British Dental Association with which we are connected. If not thought too trivial to allude to, I would here men-

tion, the great change I have noticed (and all must have done the same) existing between surgeon and dental surgeon. Not many years ago I recollect it was the custom for dentists to receive patients from surgeons as it were with *orders* to remove so many teeth—a sort of wholesale trading order. They must all come out, and *you*, the dentist, were simply the “*puller out*,” the mandate being issued by the gentleman who had recently acquired (by that cuticular anomaly, the skin of his teeth probably) the four magic letters M.R.C.S. If you ventured to express an opinion that a little mercy might be extended to a faulty molar, or a time of grace for a defective bicuspid, you were thought almost to exceed the limits of your proper calling. Well, now, gentlemen, our experiences are very different. A surgeon now recognising the speciality of the dentist will either generally consult in person or introduce the patient by a letter of courtesy, asking *your* advice in the case instead of giving his own, which must of necessity be of relatively less value. The British Dental Association will further strengthen this insistence of our superior knowledge as specialists by the fact that as many of our members possess the double qualification of general surgery and dentistry, still they confess solely by their adherence to the latter branch of the art, that in it they can find sufficient scope for the most painstaking investigator or the most abstruse theorist. Since the establishment of the Eastern Counties Branch, I think some five years ago, it has been a pleasant experience to me, and I feel since you can all echo the sentiment that the meetings we have had have engendered among us a feeling of goodwill and fraternity that was most painfully conspicuous by its absence before that period. I could name some of our members who have so far let consideration wait on duty that their names are scarcely ever absent from either Branch meetings or attendance at the parent stem in London. I am a very bad visitor myself, but following a natural instinct of our common nature, I admire most in others those qualities in which I am personally most deficient.

We have had Presidents most able, Secretaries most efficient, and a Treasurer who has been a perfect treasure. The labour of those offices has not told severely upon them, for, though arduous have been the duties, each of those gentlemen could say with Macbeth, “The labour we delight in physics pain.”

Although the Eastern Counties Branch is a small one, we are not at all above playing the proverbial cock and crowing a

bit; that though we are few we are a few of the right sort, and if our crowing can induce others of our professional brethren, now standing aloof from our society, to enlist under its banner, we shall convince them by the unmistakable welcome given, and prove to them that in the exercise of our profession, as in that of all others, the interchange of thought and feeling, the social gatherings of the dental body properly organised, and the firm desire of aiding to the best of our ability the interests of our profession at large, must lead to a better understanding amongst ourselves, induce a greater reliance on our skill by the public at large, and rescue our calling from the shadows under which it has so long lingered, by the actions of charlatans, who have delayed its recognition until very recently by the members of the other professions.

Ninth International Medical Congress.

HELD AT WASHINGTON, D.C.,

SEPTEMBER 5TH, 6TH, 7TH, 8TH, 9TH and 10TH, 1887.

[*From advance slips supplied by "The Medical Record," of New York, from its special report.*]

Monday, September 5th—First Day.

THE Congress assembled in Albaugh's Opera House, and was formally opened at eleven a.m., by His Excellency GROVER CLEVELAND, President of the United States, who said: "I feel that the country should be congratulated to-day upon the presence at our capital of so many of our own citizens, and those representing foreign countries who have distinguished themselves in the science of medicine, and are devoted to its further progress. My duty in this connection is a very pleasant and a very brief one. It is simply to declare that the Ninth International Medical Congress is now open for organisation and for the transaction of business."

DR. HENRY H. SMITH, of Philadelphia, Chairman of the Executive Committee, next named the following officers of the Congress.

President—Nathan Smith Davis, M.D., LL.D., of Chicago, Ill.

Vice-Presidents—McCall Anderson, M.D., F.F.P.S., Glasgow; Thomas Annandale, M.D., F.R.C.S. (Edin.), M.R.C.S. (Eng.), Edinburgh; Docteur Dujardin-Beaumetz (honorary) Paris; Cuthbert Hilton Golding-Bird, M.D., F.R.C.S., London; Professor

Carl Braun, M.D., Vienna; William Brodie, M.D., Detroit, Mich.; John Chiene, M.D., F.R.C.S., Edinburgh; George Joseph Hamilton Evatt, M.D., L.R.C.S., East Indies; Sir B. Walter Foster, M.D., F.R.C.P., Birmingham, England; Ernest Hart, M.R.C.S., London, England; Jonathan Hutchinson, F.R.C.S., London, England; George Murray Humphrey, M.D., F.R.C.S., Cambridge, England; Sir Thomas Longmore, C.B., F.R.C.S., Netley, England; Frederick B. Jessett, F.R.C.S., London, England; Sir William Gull, M.D., LL.D. (Cantab.), F.R.S., D.C.L. (Oxon.), London, England; William Wirt Dawson, M.D., Cincinnati, O.; Thomas Michael Dolan, M.D., F.R.C.S., (honorary), Halifax; Thomas Richard Fraser, M.D., F.R.S., Edinburgh, Scotland; James A. Grant, M.D. (honorary), Ottawa; James Andrew S. Grant, M.D., LL.D., Bey (honorary), Cairo, Egypt; A. L. Gussero, M.D., Berlin, Germany; Dr. Hans Ritter von Hebra, Vienna; Thomas John Maclagan, M.D., M.R.C.P., London, England; Sir Douglas Maclagan, M.D., F.R.C.P., Edinburgh, Scotland; Withers Moore, M.D., Edinburgh, F.R.C.P., London, M.R.C.S., Brighton, England; John Marshal, F.R.S., F.R.C.S., London, England; Sir Morell Mackenzie, M.D., M.R.C.S., London, England; Sir Henry Thompson, F.R.C.S., London, England; Sir William Roberts, M.D., F.R.C.P., London, F.R.S., Manchester, England; George B. Macleod, M.D., F.R.S., Glasgow, Scotland; John S. McGrew, M.D., Honolulu; Edward M. Moore, M.D., LL.D., Rochester, N.Y.; Karl von Mosengeil, M.D., Bonn, Germany; Professor W. D. Müller, Berlin, Germany; Wm. Murrell, M.D., M.R.C.S., London, England; Chas. D. F. Phillips, M.D., F.R.C.S., London, England; Richard Quain, F.R.C.S., London, England; Tobias G. Richardson, M.D., New Orleans, La.; William S. Savory, F.R.C.S., London, England; Sir John Tames, F.R.C.S., Surrey, England; Sir John Watt Reid, K.C.B., M.D., LL.D., London, England; Sir William Stokes, M.D., F.R.C.S., Dublin, Ireland; Lawson Tait, M.D., F.R.C.S., Birmingham, England; John Burdon Sanderson, M.D., LL.D., F.R.C.P., Oxford, England; Lewis A. Sayre, M.D., New York; Dr. Mariano Semmola, Naples, Italy; Dr. Leopold Servais (honorary), Antwerp; Sir William Turner, M.B., F.R.C.S., Edinburgh; Dr. P. G. Muna (honorary), Hamburg; Dr. J. E. de Virji, Hague; Professor F. Winckel, M.D., Munich; A. Y. P. Garnett, M.D., Washington, D.C.; John Moore, M.D., United States Army; Francis P. Gunnell, M.D.

United States Navy; Sir Edward H. Sieveking, M.D., LL.D., F.R.C.P., London, England; William Harris Lloyd, M.D., L.R.C.S., London, England; Dr. Nicholas José Giuteras, Havana; Joseph Ewart, M.D., F.R.C.P., Brighton, England; Professor Friedrich Esmarch, Kiel, Germany; John Tweedy, M.D., F.R.C.S., London, England; Sir William Jenner, F.R.S., M.D., K.C.B., D.C.L. (Oxon), London, England; Dr. F. Dumont, Berne, Switzerland; Dr. A. Pearce Gould, London, England; Dr. Waldeyer, Berlin, Germany; Dr. O. Morisani, Naples, Italy; Dr. Wilhelm Meyer, Copenhagen; Jeffrey A. Marston, M.D., M.R.C.S., London, England; Joseph R. Smith, M.D., New York, N.Y.; John Dennis Macdonald, M.D., M.R.C.S., Surrey, England; Dr. John Marshall, London, England; Professor C. F. Durante, Rome, Italy; Dr. Theodore Kocher, Berne, Switzerland; Professor Trelat, Paris, France; Dr. J. M. Toner, Washington, D.C.; Dr. Charpentier, Paris, France; Dr. Chervin, Paris, France; Dr. Léon Sable, Paris, France; Dr. Léon Le Fort, Paris, France; Dr. Vallin, Paris, France; Dr. Neudörfer, Vienna, Austria; Dr. Von Coler, Berlin; Sir James Arthur Hanbury, M.B., K.C.B., F.R.C.S., London, England; William Alexander Mackinnon, C.B., L.R.C.S., London, England.

Secretary General.—John B. Hamilton, M.D., Washington, D.C.

Treasurer.—E. S. F. Arnold, M.D., M.R.C.S., Newport, R. I.

Chairman of the Finance Committee.—Richard J. Dunlison, M.D., Philadelphia, Pa.

Chairman of the Executive Committee.—Henry H. Smith, M.D., LL.D., Philadelphia, Pa.

Chairman of the Committee of Arrangements.—A. Y. P. Garnett, M.D., Washington, D.C.

PRESIDENTS OF SECTIONS.

Section I. General Medicine—Abraham B. Arnold, M.D., Baltimore, Md.

Section II. General Surgery—William T. Briggs, M.D., Nashville, Tenn.

Section III. Military and Naval Surgery and Medicine—Henry H. Smith, M.D., LL.D., Philadelphia, Pa.

Section IV. Obstetrics—De Laskie Miller, M.D., Ph.D., Chicago, Ill.

Section V. Gynecology—Henry O. Marcy, M.D., Boston, Mass.

Section VI. Therapeutics and Materia Medica—Traill Green, M.D., LL.D., Easton, Pa.

Section VII. Anatomy—William H. Pancoast, M.D., Philadelphia, Pa.

Section VIII. Physiology—John H. Callender, M.D., Nashville, Tenn.

Section IX. Pathology—Alonzo B. Palmer, M.D., LL.D., Ann Arbor, Mich.

Section X. Diseases of Children—J. Lewis Smith, M.D., New York.

Section XI. Ophthalmology—Julian J. Chisolm, M.D., Baltimore, Md.

Section XII. Otology—Samuel J. Jones, M.D., LL.D., Chicago, Ill.

Section XIII. Laryngology—William H. Daly, M.D., Pittsburgh, Pa.

Section XIV. Dermatology and Syphilography—Andrew R. Robinson, M.D., New York.

Section XV. Public and International Hygiene—Joseph Jones, M.D., New Orleans, La.

Section XVI. Climatology and Demography—Albert L. Gihon, M.D., U.S. Navy.

Section XVII. Psychological Medicine and Nervous Diseases—Judson B. Andrews, M.D., Buffalo, New York.

Section XVIII. Dental and Oral Surgery—Jonathan Taft, M.D., Cincinnati, O.

REPORT OF THE SECRETARY-GENERAL.

Mr. PRESIDENT: According to the precedent set at former sessions of this body, the Secretary-General must make a report of the work performed since the session last preceding, but I will only occupy the time of the Congress for the briefest possible space.

It is now a matter of history that in May, 1884, the American Medical Association met in this capital, and passed a resolution inviting the Congress to honour America by holding its next session in the United States.

At the meeting in Copenhagen, in August, 1884, when the question came up for disposition, Washington was selected. The committee, having borne the invitation and secured its acceptance, returned home, and immediately began the work of organisation, and shortly before the meeting of the American Medical Associa-

tion in New Orleans, in May, 1885, they completed the preliminary organization. But it transpired that this committee were unable to frame an organization satisfactory to the majority of the members of the Association, and, after some discussion, a resolution was adopted which authorised the appointment of additional members of the committee, and, in accordance with our American system of representation, the committee consisted of one member from each State and Territory of the Union, to which was added one representative from each of the three public medical services, and these new members were elected by the State and Territorial delegations. The enlarged committee met in Chicago a few weeks after the New Orleans meeting of the American Medical Association, and several of the members of the first committee were present and acted harmoniously with the committee. In a short time, however, each of the original committee had withdrawn, and the management was thus deprived of their experienced and valued services. The committee have, therefore, had to contend against more than the ordinary difficulties attending so great an undertaking, and its present success is due entirely to the zeal and energy of its chairman, Professor H. H. Smith, of Philadelphia, and the unflagging interest and industry of the remaining members of the committee.

Dr. A. Y. P. GARNETT, of Washington, D.C., Chairman of the Local Committee of Arrangements, then announced the arrangements for the social entertainment of the members of the Congress and their families.

THE ADDRESS OF WELCOME was delivered by Hon. THOMAS F. BAYARD, Secretary of State. In the name of his fellow-countrymen he expressed gratification at the visit of the delegates to Washington. The world is becoming acquainted and international intimacy is growing; a spirit of common brotherhood is increasing, so that the word "stranger" will soon be obliterated from the vocabulary of civilization. If letters constitute a republic, science is a democracy. In the United States individual enterprise has produced great scientific institutions without the aid or interference of Government. The proceedings of the Congress will be watched with interest by the sixty million people of this country.

Responses were made by the following gentlemen: Dr. William H. Lloyd of the Royal Navy; Dr. Léon Le Fort, of France; Professor Unna, of Germany; Professor Semmola, of Italy; Dr. Charles Reyher, of Russia.

Dr. LEWIS A. SAYRE, of New York, occupied the chair during the delivery of the address of the President of the Congress.

Dr. DAVIS began by paying an eloquent tribute to the memory of Austin Flint, M.D., LL.D., and continued as follows :—

With a full consciousness of my own deficiencies, and still with a heart overflowing with gratitude, I thank you for the honour you have bestowed in selecting me to preside over the deliberations of this great and learned assembly. It is an honour that I appreciate as second to no other of a temporal nature because it has been bestowed, neither by conquest nor hereditary influence, nor yet by partisan strife, but by the free expression of your own choice.

The living human body, the chief object of your solicitude, not only combines in itself the greatest number of elementary substances and the most numerous organs and varied functions, so attuned to harmonious action as to illustrate the operation of every law of physics, every known force in nature, and every step in the development of living matter from the simple aggregation of protoplasm constituting the germinal cell to the full-grown man, but it is placed in appreciable and important relations with the material objects and immaterial forces existing in the world in which he lives.

Hence a complete study of the living man, in health and disease, involves a thorough study, not only of his structure and functions, but more or less of every element and force entering into the earth, the air, and the water, with which he stands in constant relation.

The medical science of to-day, therefore, embraces not only a knowledge of the living man, but also of such facts, principles, and materials gathered from every other department of human knowledge as may increase your resources for preventing or alleviating his suffering and of prolonging his life.

The time has been when medical studies embraced little less than the fanciful theories and arbitrary dogmas of a few leading minds, each of which became for the time the founder of a sect or so-called school of medicine, with his disciples more or less numerous. But with the development of general and analytical chemistry, of the several departments of natural science, of a more practical knowledge of physics, and the adoption of inductive processes of reasoning, the age of theoretical dogmas and of medical sects blindly following some more plausible leader passed away, leaving but an *infinitesimal* shadow yet visible on the medical horizon.

The address closed with an appeal for the collective investigation of the phenomena of disease.

The Congress then adjourned.

SECTION ON DENTAL AND ORAL SURGERY.

JONATHAN TAFT, M.D., OF CINCINNATI, O., PRESIDENT.

Secretaries—A. M. Dudley, M.D., of Salem, Mass. ; F. H. Rehwinkel, M.D., of Chillicothe, O.

Monday, September 5th—FIRST DAY—AFTERNOON SESSION.

The PRESIDENT welcomed those present.

Drs. I. V. METNITZ, of Austria ; B. McLEOD, of Scotland ; and GREVERTS, of Holland, replied in behalf of the countries they represent.

The PRESIDENT then delivered his address, in which he reviewed the progress of dentistry in the last fifty years, and concluded by saying that although the past record was an excellent one, yet the goal was not yet reached. He urged the profession, through those present, to work in all earnest for a yet higher standard.

Dr. R. J. PORRE, of Cincinnati, O., read a paper on "Chronic Pyæmia from Dental Origin." The history of the case is as follows :—The patient, male, good constitution and habits, suffered for the last thirty years from neuralgia, besides having constantly recurring furuncles and eruptions in various parts of the body, which would often for months become running abscesses. He experienced burning and itching eruptions of hands and feet, which would finally change to stubborn ulcerations. His bowels were either stubbornly constipated or exhaustingly loose. He suffered from frequent rigours and febrile attacks of varying intensity, profuse night-sweats, retention of urine, serious constriction of the bowels and urethra. Lancinating pains darted from the maxilla of right side to bowels, bladder, limbs, hands and feet, or to whatever part was locally affected at the time. This latter peculiarity, together with the discovery of a little pus exuding from the locality of the wisdom-tooth, led to a final correct diagnosis of his case.

The tooth referred to was extracted, and a speedy and complete recovery followed. As other sources leading to pyæmia, and having their starting-point in the oral cavity, may be mentioned pyorrhœa alveolaris, alveolar abscess, abscess of the antrum, and dental caries.

The doctor related ten other cases similar to the above, which all yielded to the simple remedy of removing the offending tooth.

Dr. J. FRANK LYDSTON, of Chicago, Ill., said that both physicians and dentists should appreciate the important relation which morbid conditions of the mouth and jaws, and especially those which may be produced by septic absorption, bear to different general conditions. Septic matter is quite generally found about the roots of teeth, and may, under favouring circumstances, be absorbed into the blood, and there produce disturbances of greater or less degree.

The paper was further discussed by Drs. Walker, of London, England; Barrett, of Buffalo, N.Y.; W. J. Younger, of San Francisco, and Chance, of Oregon.

Tuesday, September 6th—Second Day—Morning Session.

Dr. WILLIAM CARR, New York, gave a clinic on the "Treatment of Fractures of the Maxillæ with Modified Interdental Splint." The majority of fractures of the inferior maxilla occur in the body rarely at the symphysis menti, but usually directly anterior or posterior to the mental foramen. A noticeable fact in connection with these fractures is that the victim rarely applies for treatment for several days succeeding the injury. He realises that some of his teeth are loosened and also that he is painfully bruised, but does not seek surgical aid until he becomes alarmed by the increased inflammatory condition of the parts. There is but little difficulty in establishing a correct diagnosis, as usually the following symptoms are present—great pain in the effort to open and close the mouth, swelling, crepites, inflammation, inability to masticate, and marked irregularity of the teeth.

Treatment.—It is identical with that of other fractures, namely, to bring the parts into apposition and retain them firmly until ossification is completed. For treatment of fractures of the maxillæ there is nothing superior to the interdental splint. When properly adjusted, speedy union may be secured without deformity of the jaw or irregularity of the teeth. Before taking the impression a careful examination of the parts should be made. Loose teeth and spicula of bone should be removed, and the parts should then be brought as nearly as possible to their normal position. An accurate impression should be made with impres-

sion-compound or wax. The material used should be as warm as the patient can bear it, in order to prevent unnecessary pain, and also to prevent further displacement of the parts. The splint is made of vulcanite and covers all the teeth of the lower jaw, and all the teeth posterior to the canine in the upper jaw—leaving a space of about three or four lines through which the patient may receive nourishment. Small holes are drilled in the splint over the grinding surface of each molar for the purpose of ascertaining whether its adjustment is proper.

The splint should first be adjusted to the sound jaw, then gently bring the fractured jaw into position until it has passed about two-thirds of the length of the teeth—then with a quick, firm motion bring the parts into position. Next apply a four-tail bandage, which should be retained from three to five days; after this time, in the majority of cases, it may with safety be removed during the day but should be replaced at night until the removal of the splint. The patient should be furnished with an ordinary rubber syringe, and instructed to keep the mouth thoroughly cleansed. For disinfectants I use peroxide of hydrogen three per cent. solution, or a solution of bisulphate of soda in the proportion of 3j to 3j, of water.

In ordinary cases the splint should be retained for three or four weeks, according to the physical condition of the patient—unless unforeseen complications should arise. The application of the splint, combined with thorough cleanliness, will usually be all the treatment required.

The advantages, besides those previously stated, are that the patient experiences but little pain and inconvenience, and can, as a rule, attend to his business almost immediately after the splint is applied.

It is not necessary that all the teeth, nor, indeed, that any should be present in the mouth in order to make this splint serve its purpose. In the first case the rubber can be made to take the place of the missing teeth, and in the latter case a perfect adaptation of the splint to the alveolar ridges can be secured, and will be found to keep the parts in perfect apposition.

Should it be deemed advisable to place a splint in position within an hour or two after seeing the case, one can be constructed entirely of ordinary gutta percha, with just enough wire inside to stiffen it. Dr. Carr demonstrated this last method—it is very simple and can be made by any surgeon.

A number of gentlemen examined the principle and pronounced it very satisfactory in every way, the main points being its simplicity of construction, its effectiveness, and the ease with which it is adjusted and worn by the patient.

Dr. E. BRASSEUR, of Paris, France, read a paper on "The Use of Air in Dental Therapeutics."

The reader urged that the ordinary means, such as bichloride and biniodide of mercury and carbolic acid crystals, for destroying microbes in the oral cavity and, especially, in carious cavities of teeth, should be supplemented by the use of hot air.

Dr. C. A. BRACKETT, of Newport, R. I., discussed the paper at some length laying considerable stress on the efficacy of crystallised carbolic acid as a germicide in carious cavities in teeth.

Other discussions followed, by Drs. James Truman and W. H. Morgan.

AFTERNOON SESSION.

Dr. JUNIUS E. CRAVENS, of Indianapolis, Ind., read a paper on "The Management of Pulpless Teeth." This system is based on the proposition that a pulpless tooth is not necessarily dead. The pulp being devitalised, the tooth still retains life through its pericementum. The usual course of treating pulpless teeth with escharotics and irritants cause irritation and final destruction of the pericementum, and the result is that the tooth, instead of being preserved, will act as a foreign body, and will be thrown off by nature through abscesses: or, worse still, will lead to no end of nervous derangements. The treatment suggested by the reader is to thoroughly cleanse the pulp-canal, and at once hermetically seal it with tin-foil.

The paper was discussed by Dr. THOMAS FILLEBROWN, of Portland, Me. He did not agree with the essayist in the method outlined in the paper. The doctor gave a short synopsis of the method he employs in treating pulpless teeth, which, by the manner in which it was received by the Section, seemed to be the one generally pursued.

Dr. A. W. HARLAN, of Chicago, Ill., followed, and likewise objected to the views expressed by the essayist. A dead pulp produces no irritation in the canal; the disease which it causes is beyond. If you could mechanically displace an odour—which the speaker denied—and should then fill the root-canal without any disinfection, disaster would inevitably follow unless there should be a fistulous outlet.

Dr. W. C. BARRETT, of Buffalo, N.Y., in discussing the paper, stated whether viewed from the standpoint of pathology or etymology the paper is alike remarkable. That such a mass of absurdities could be presented at a meeting of the world's representatives in dentistry is to me astounding, and I protest against its acceptance as the standard by which to judge the intelligence of American dentists. That the exploded dogmas of twenty-five years since should be gravely and in all sincerity presented at such a meeting as this, is, I must confess, something for which I was not prepared. The assertion that a closed chamber in which exists the septic *débris* and the products of decomposition of a tooth-pulp should not be opened and evacuated, I can scarcely believe is made in calm earnest. The essayist has exhibited his complete ignorance of the progress of the past century. Modern antiseptic pathology has taught us certain facts, and amongst these is the knowledge that the first step in the treatment of aseptic cavities is complete drainage; second, disinfection and the removal of all the products of disorganization; third, destruction of septic organisms; and finally, the complete sealing of the cavity against further infection. These comprise the essential steps in the treatment of septic root canals. I will not insult the intelligence of those present by presuming to enlarge upon this and by going into the details of treatment, for this is not a body of tiros. But I do object to a consideration of the subject from the low standpoint of this extraordinary paper.

Dr. T. E. WEEKS, of Minneapolis, Minn., read a paper on "Matrices as Adjuncts in Filling Teeth." The essayist reviewed the different appliances for simplifying what would otherwise be very laborious operations. A perfect matrix should be simple in construction, cheap, easily adapted, and not too stiff, so that when applied it will yield just enough to allow sufficient gold to pass beyond the walls of the cavity for a good finish.

Dr. F. H. GUILFORD, of Philadelphia, Pa., in a few brief remarks, endorsed the sentiment expressed in the paper.

Third Day, Wednesday, September 7th—Morning Session.

Dr. PRADÈRE, of Lyons, France, read a paper on "Phthisis Cured by the Continuous Application of Medicine to the Palate."

Immediately after the paper was read, Dr. JAMES TRUEMAN, of Philadelphia, Pa., moved that it should *not be accepted by the Section*,

but should be referred, without discussion, to Section I., in General Medicine ; also embodying that the Executive Committee be censured for allowing such a paper to come before the Section. The motion was seconded by Frank Abbott, M.D., of New York, but the Chair ruled that, inasmuch as the Executive Committee had seen fit to admit this paper, it would be out of order to put the motion to the house. Dr. Trueman dissented from the decision of the Chair and renewed his motion. The question being then called, it was voted to refer the paper to Section I.

A number of gentlemen gave clinics in the treatment of diseased conditions of the oral cavities, and others demonstrated their methods of filling teeth and constructing artificial dentures for patients. These clinics are spoken of as the most successful features in this Section, and it is but just to say that a good deal of credit is due to Dr. C. F. W. Boedecker, of New York, for the result.

Dr. METNITZ, of Vienna, Austria, read a paper on "Osteomyelitis." The main feature of the paper was the report of two cases from practice. The history of the first case was as follows: In October, 1886, a lady, aged forty-three, had two teeth extracted. A few days later she suffered with chills, which were followed by slight mental disturbances. The seventh day the patient became unconscious, in which condition she was brought to the hospital. Examination revealed that there was a large swelling over the left cheek, extending to the temporal region; the skin covering this swelling was tense and pale in color; the sclerotic was highly colored (yellow), and the skin showed yellow tinge; the pupils were without reaction. The odour of the breath gave evidence of necrosis. The submaxillary glands were very much enlarged, and the neighbouring tissues infiltrated. There was unconscious urination and defæcation. Death occurred the following day. The post-mortem examination showed the membranes of the brain to be thickened and traversed by numerous vessels. The left hemisphere was covered by a layer of pus, and the right hemisphere showed considerable pus along the track of the vessels as well as several pus-depôts. The brain-substance was quite soft. The examination of the oral cavity disclosed that of the two teeth extracted the upper alveolus had almost entirely filled up with healthy granulations, whereas the lower was filled with pus. The mucous membrane in the region of this diseased alveolus was very much discoloured and could be

easily removed in pieces. The probe discovered nothing but dead bone. All the muscles of the neck which are attached to the left side of the lower jaw were infiltrated with pus. The periosteum was separated from the left side of body and ramus of the jaw. The alveolus of the extracted wisdom-tooth communicated by two good-sized openings with the marrow-cavity, and the marrow itself was discoloured and infiltrated with fat. The cause of this extensive destructive action is no doubt to be looked for in the unclean condition of the alveolus after the extraction. Sections of the jaw show that the medullary canal was very much enlarged.

Kocher, Rosenbach, and Busch, in experimenting on animals, have found that it is impossible to produce an acute pus-forming osteomyelitis either through traumatic injury or chemical and mechanical irritation, but that such a condition can readily be brought about by infecting the fresh wound in the bone by any decaying substance.

The second was one of multiple osteomyelitis. The patient, male, aged seventeen, suffered from an attack of osteomyelitis of the humerus, the ulna, and the lower jaw. According to Billroth, it is not settled whether this condition (multiple osteomyelitis) is due to septic influences acting on various places at the same time, or whether the infection dates from one point.

Death in this case, as in the first, was directly due to acute suppurative meningitis. When we have to deal with a simple inflammation, energetic antiseptic treatment will prove quite sufficient. In severer cases of osteomyelitis Billroth advises that the seat of disease be reached as soon as possible—the pus evacuated, the cavity thoroughly disinfected, and dressed with antiseptic dressing. Many cases present no actual dépôts of pus, or abscesses, but simply an infiltration of the marrow. In such cases Billroth holds it of little value to open into the medullary canal. Neither does he advocate disarticulation or resection, because, in the first place, the exact extent of the disease cannot be foretold, and, secondly, the medullary substance of a patient suffering from osteomyelitis is in such a susceptible condition that a new injury would almost certainly prove fatal. The paper was read by the essayist in German. No discussion followed.

Dr. JENISON, of Minneapolis, Minn., read a paper on "Art in Dentistry." The essayist advocated the restoration in gold of all teeth that had been destroyed by caries, thereby improving both

their usefulness and beauty. In constructing artificial dentures more time should be given to the restoration of the features of the patient, and for that purpose single and not section teeth should be used.

Dr. JOHN ALLEN, of New York, discussed the paper, taking up the main points to be observed in constructing an artificial denture. He closed his remarks by saying that inasmuch as the countenance reveals the thoughts of a person, great care should be exercised in restoring lost features.

AFTERNOON SESSION.

Dr. R. R. ANDREWS, of Cambridge, Mass., read a paper on "The Origin of the Dental Fibril, Illustrated by aid of the Stereopticon. Dr. Andrews described his process of preparing and mounting the specimens for the microscope, which differed in no essential respect from the latest methods employed by others for that purpose. In speaking of the formation of the fibrils, the essayist says there are two kinds of odontoblasts—those which are square toward the dentine, and others, just by the sides of the first mentioned, which are pear-shaped. From these latter, and not from the first (or square end ones), originate the dental fibril. The stereopticon views presented by the doctor showed very clearly with what patience, earnestness, and intelligence the essayist worked to establish his view of the question. And the hearty appreciation accorded him by the Section was well merited.

Dr. FRANK ABBOTT, of New York, in opening the discussion, paid a high tribute to the reader of the paper for the hard work done in behalf of his speciality. In order to understand the process by which the dental fibril is produced, it is necessary for us to consider the matter from the third to the fifth month of intra-uterine life, at which period of the existence of the foetus the papillæ of teeth are so far developed that a material change is observed to be taking place. The papilla is a mass of myxomatous tissue, liberally supplied with medullary elements. In some instances at three months, at others as late as the fifth of intra-uterine life, a coalescing of several of the medullary corpuscles into one may be observed upon the periphery of the papilla adjacent to the enamel organ, which at this period may be observed forming a cap upon the papilla. The united medullary corpuscles are known as odontoblasts. The impression has gene-

rally prevailed among histologists and embryologists, that the odontoblasts were directly formed into dentine. This theory, through recent researches, has been proven to be incorrect. The odontoblasts, when viewed with a power of 1,200, show a delicate reticulum, which unites the nuclei with the walls of each corpuscle and with each other. This reticulum, as well as the walls of the odontoblasts, are the living matter which remains as the living portion of the dentine. Before the beginning of the deposition of lime salts, the odontoblasts are re-converted into medullary substance. As such they receive the calcareous basis-substance, and thus a certain territory of the papilla becomes dentine. While this process of calcification is going on, another row of odontoblasts makes its appearance, from the sides and ends of which prolongations of the living matter may be seen running into the canaliculi of the dentine already formed. A spindle or pear-shaped odontoblast gives off one, while those with broad ends give off two, three, and even five, prolongations. If the views advanced in the paper were correct, it would necessarily follow that territories of considerable size would be left in the dentine with no canaliculi whatever; nor is there any provision for furnishing these territories with any living tissue.

Dr. FLETCHER, of Cincinnati, O., read a paper on "Protective Dentine," illustrated by Stereopticon. This paper was listened to with great interest by the Section. The slides which were shown on the screen showed the different kinds of protective dentine, and the essayist gave his views of how these different efforts on the part of nature to protect herself are brought about.

Dr. W. X. SUTTUTH, of Philadelphia, agreed with the essayist in the practical conclusions drawn; he supplemented the reader's remarks by stating that the odontoblasts remain after the development of the dentine, and can be stimulated to produce or perform their function of forming protective dentine.

Dr. W. H. ATKINSON, of New York, complimented the gentlemen on producing such well-digested papers.

Dr. J. HOWARD MUMMERY, of London, England, exhibited photo-micrographs of all the structures of the tooth, and explained the best method of producing them.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The next Examination for the Licentiate'ship in Dental Surgery will be held on Monday, the 31st of October, and two following days.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

Birmingham Dental Students' Society.

THE Annual Meeting of the Birmingham Dental Students' Society was held at 71, Newhall Street, on Thursday, September 21st, 1887. Mr. F. H. Goffe, L.D.S., took the chair, and there were also present Messrs. Neale, Madin, Howard, Matthews, Sims, Parrott, Foster, Berbyn and Naden.

The minutes of the last meeting having been read and confirmed were then signed by the chairman.

Letters of apology and regret were received from Mr. Charles Sims, Mr. J. Humphreys and Mr. F. W. Richards.

The report upon the past year was then read, as follows :—The Birmingham Dental Students' Society was inaugurated at the beginning of the winter session last year (1886).

Together with the President, Vice-President and the officers, who have presided, we number some fifteen or sixteen members.

Mr. Chas. Sims has presided for the past year, Mr. J. Humphreys being Vice-President.

Reference to the minute book shows an average attendance of nine members at each meeting.

The papers which have been read comprise :—"Extraction and its Attendant Accidents," by Mr. W. Palethorpe, L.D.S. ; "On Pivots and Pivotting," by Mr. Madin, L.D.S. ; "On the Administration of Nitrous Oxide under Pressure," by Mr. Howard ; "On Gold Plate Work," by Mr. Parrott, and "On the Pathology of Dental Periostitis," by Mr. Miller.

Pathological specimens of much interest, including epithelioma of tongue, epulis (two specimens), and an antral cyst, have been exhibited, and a rare specimen of an odontome radicaire, with notes upon its history, was given by Mr. Matthews. Notices of the formation of the Society, have been sent to and have appeared in, the *Record* and *British Journal of Dental Science*.

One member, Mr. Madin, has, during the past year, obtained the diploma of L.D.S., which may be taken as a credit to the Society.

We have also to announce with deep regret the decease of one of our members, Mr. A. J. Wilson.

Messrs. Foster and Royal were elected members of the Society.

The officers for the ensuing year were then elected as follows :—

President, Mr. Humphreys ; *Vice-President*, Mr. Breward Neale ; *Hon. Treasurer*, Mr. G. F. Matthews ; *Hon. Secretary*, Mr. P. T. Naden ; *Committee*, Messrs. F. Howard, E. Sims, E. Parrott.

It was resolved that no rule should be altered, except at a special meeting called for that purpose.

Mr. Breward Neale was elected Chairman for the next meeting.

A vote of thanks to the retiring Secretary then terminated the proceedings.

Brighton Dental Society.

WE have received from the Hon. Secretary Mr. D. E. Caush, the following report of the above Society :—

We commenced our work in November last with eight members, and during the session the names of seven gentlemen have been added to our list.

Our meetings have been well attended, much pleasure and profit has been derived from them under the able chairmanship of our much respected president, O. A. Fox, Esq.

The meetings have been six in number, the first of which was held at 14, Pavilion Parade, when the President read a paper on "Progression of Dental Surgery." Meetings have also been held at 21, Old Steine, 53, Norfolk Square, and 65, St. John's Terrace, West Brighton.

During the session the following gentlemen have read papers : O. A. Fox, Esq., "Progression of Dental Surgery ;" C. B. Stoner, Esq., "Dental Hospitals, What Busy Men may do there ;" J. Wood, Esq., "On Regulation Cases ;" S. S. Johnson, Esq., "Dental Materia Medica ;" and E. L. Norris, Esq., "Saliva and Salivary Calculus."

During the session the following objects have been brought before the Society :—Regulation Cases, Continuous Gum Work, Forceps, Nerve Extractors, Fillings on Herbst principle, Filling Gold and Tin, Abnormal Teeth and Models of various cases of interest.

Before bringing this report to a close, the Hon. Secretary desires to draw the attention of the Society to the flourishing financial condition as seen by the Treasurer's report, also to tender his best thanks to the members for their hearty response in supplying papers, &c., during his term of office.

The following gentlemen were then elected for session 1887-8 :

President, J. Wood, Esq. ; Vice-president, O. A. Fox, Esq. ; Curator, C. B. Stoner, Esq. ; Treasurer, S. Johnson, Esq. ; Secretary, Douglas E. Caush, 63, Grand Parade, Brighton.

NEW INVENTIONS.

Mallet.

us for approval think that most ect it and try its de upon a plan ogers' reputation so very high in ity, that the fact rs it unnecessary ical tool. More ts construction, of order. The llet differs from th of the blow is operator chooses y the closure or is seen in the The instrument has a collar that can be adjusted so as to shut off this air hole to any degree ; the same result

can, however, be attained by controlling the aperture with the finger, so that an infinity of gradations, from the faintest conceivable touch to a strong blow, are obtainable without any delay for adjusting the instrument. When the air ball is compressed, the ejected column of air is forced against a small weight, which is thus propelled against the point. The ordinary points are employed, and the air ball may be controlled by placing the foot upon it.

ANNOTATIONS.

WE are asked to state that the annual dinner of the staff, past and present students and friends of the Dental Hospital of London, will be held on Saturday, December 3rd, at the Holborn Restaurant. This date has been chosen in order that gentlemen coming from the country to the Representative Board meeting in the afternoon, or to the Odontological Society's meeting on Monday evening may make arrangements to be present. The Dean of the School ventures to hope that there will be a large gathering. Tickets will be 10s. 6d., exclusive of wine. Applications should be sent to the Dean as early as possible that definite arrangements may be made. The name of the Chairman will be announced in our next issue. We have every reason to believe that the coming gathering will be as enjoyable as its predecessors.

THE report of the operations at the Addenbrooke Hospital dental department, which we publish elsewhere, is interesting, especially as taken in conjunction with the fact that the average number of patients before the department was started was five or six in a week. In all the teeth examined during the existence of the dental department, only about a dozen stoppings have been observed, and this would certainly suggest that the patients were either unable or unwilling to pay for conservative treatment, and, therefore, this dental department cannot be said to have inflicted much injury upon the small local practitioners.

IT is always pleasant to read of any of our body receiving public recognition from his fellow men for good work done outside the limits of his calling, and we are, therefore, sure that our readers will join with us in congratulating Mr. John Humphreys, jun., of Broomsgrove, on the reception given him the other day by his fellow townsmen. Mr. Humphrey's energy is well known to those who are intimate with the working of the Central Counties Branch, of which he is secretary. His taste for work has, however, found him fresh employment in organising the jubilee rejoicings in his town, and this he did with such conspicuous success that his fellow townsmen gave him a complimentary dinner and presented him with a commemorative medal.

A CORRESPONDENT has sent us a useful hint about cocaine. Every one has experienced the annoyance of that tiresome form of cough, which results from reflex irritation, familiarly known as a "tickling

in the throat." It specially affects nervous persons, and is both irksome to the operator and distressing to the patient. Mr. James Rymer assures us that it is very easy to allay these symptoms by placing a "cocaine pastil" on the patient's tongue which slowly dissolves, and the effects last for an hour or so. In a few moments all the laryngeal irritation subsides, and the operation is no more interrupted. As there are many forms of cocaine lozenge, Mr. Rymer adds that he prefers a form called Honde's Pastile.

WE are requested to state that the absence of Mr. Felix Weiss, the recently elected Vice-president of the Representative Board, from the Glasgow Meeting, was due to the delicate state of his health, which rendered the journey impossible. A letter of apology, stating the cause of his enforced absence, was addressed by Mr. Weiss to the President-elect, but as no notice of any such letter appeared in our report, he was apprehensive that members of the Association might consider that he was indifferent to the affairs of the Association, and unmindful of its interests, and requested us to make this explanation. The report of the meeting, which was sent to us, did not contain any statement about the letter having been received.

THERE was a slight inaccuracy in the report we received from Glasgow, in which Mr. Kirby, of Bedford, was represented as preferring Birmingham for the annual meeting next year, because England is larger than Ireland. Mr. Kirby's real contention was that it was inadvisable to hold the meeting away from the larger centre two years in succession.

AT Ferrybridge near Pontefract, the remains of a boy named Arthur Chester, who was drowned last year, have recently been brought to light. The account in the *Bradford Observer* for September 21st, states that "In 1878 the lad was drowned in the river at Ferrybridge, and no trace of his body could be found, and it was thought that he had been washed into the sea, as the river at that time was very flush. On Wednesday, whilst some boatmen were engaged dredging for sand, the body of the lad was discovered embedded in the bottom of the water, and covered with sand and mud." The identification of the body was rendered possible by the boots the deceased was wearing which had been repaired shortly before the accident, and by some peculiarities about his teeth, notably the absence of one.

In our report of the Dublin meeting, the name of the President of the Royal College of Surgeons of Ireland, was, by a printer's error, given as Professor Corby, instead of Corley.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

Dental Appointments at General Hospitals.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Your correspondent X has expressed, decisively and clearly, the thoughts of many of those who have given their attention to the question of the advisability of establishing special hospitals.

It must be evident to any person who has been connected with such institutions, whether as an official or student, that, unless the management is so arranged that it is not possible for one or two individuals to assume entire control, special hospitals do afford a fair field for the manœuvres of those who are desirous of advancing their own interests, and are regardless how they do so.

It is a matter of common experience for a student at a dental hospital to be asked by the patients under his charge to supply them with artificial teeth; and offers are frequently made to pay a reasonable fee for the same. When such circumstances arise, the student is advised to recommend the patient to any respectable practitioner so that he may not fall into the hands of advertising charlatans. Whether one who is in a position to pay a fee for artificial teeth has any right to become a hospital patient, is a question I have not space to enter into, but that such is the case is well known.

With these facts before us, we may expect to find in the future, when the profession becomes more crowded, that there will be a tendency for Dental Hospitals to spring up, which are virtually, though not ostensibly under the control of one or two individuals. If they were made self-supporting, in the same way as some *bona fide* provident dispensaries they might do good; but if, following the example of those alluded to by X, they, under the cloak of charity, advertise for subscriptions, pay persons a handsome percentage for collecting them, and are really kept up only that paying patients may be transferred from hospital to private practice, and that professional adventurers may effectually advertise themselves as distinguished specialists, the sooner the public is made aware of the nature of such institutions the better. Indeed it is to the public in the end to whom we must look for aid in abating the great abuse to which the sham special hospital has grown; and there are signs that the public is slowly becoming enlightened on the question, and the time seems approaching when special hospitals must either pass into unenviable notoriety, or else disappear. On these grounds I agree with X that unless under exceptional circumstances such as attended the earliest organisation of the dental profession in England, and which led to the establishment of dental hospitals, it were better to provide dental aid for the poor, and instruction for students, through properly organised dental departments of general hospitals.

Yours faithfully,
STUDENS.

London, Oct. 4th, 1887.

Mechanical *v.* Operative Dentistry.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—May I refer in a few words to the paper read by Mr. Cunningham at the annual meeting of the Southern Counties Branch at Croydon, in order to point out what, no doubt, has occurred to others, the unfair inference likely to attach to such a communication.

In order to prove that mechanical dentistry is a more expensive method than operative, a case is instanced of a most unusual character.

An L.D.S.E. is accused out of the mouth of Mr. Cunningham's patient, of a most flagrant mistake in dentistry (to put no worse construction upon it), viz., the extraction of a tooth that could be saved. The word of the patient is implicitly trusted, and the "dark speck upon the tooth" spoken of, is construed by Mr. Cunningham into a cavity, the filling of which could not be otherwise than satisfactory. What possible proof is there of this? Secondly this L.D.S. (the profession would be glad to know his name, and for his own sake he would surely like to be openly accused that he might refer to the case and vindicate himself), after perpetrating this dental outrage, further aggravates the offence by inserting a plate so studded with fastenings as to injure several other teeth. This extraordinary statement which amounts almost to a libel upon a qualified man ought not to be allowed to rest unchallenged; and the second L.D.S. consulted by this unfortunate patient, ought also to have a chance of letting his brother dentists know why he so studiously followed his predecessor, for they both seem to have been educated in the same extraordinary school, as it will be acknowledged by every unbiased mind, that these men *do not* represent the body of practitioners. And just as it is manifestly unfair to judge the profession by two such specimens, so is it equally unfair to accept the case mentioned by Mr. Cunningham as proof in any way conclusive, of the theory he wishes to propound. At any rate, the record of similar cases, where poor patients have in seventeen years, worn no less than thirteen plates, and have been mulcted in damages to the tune of £50 would be a subject of interest if not curiosity.

There are a few things which seem quite incomprehensible to me. First, the extraordinary absorption spoken of, after the extraction of the said lateral tooth, as it must be the experience of hundreds of dentists, that artificial laterals are fitted into the mouth every day (after extractions) that quite defy detection, and with no fastenings whatever. Secondly, that such a system of robbery exists among respectable dentists, that not one out of the large number consulted by this hapless patient, should have suggested the addition of teeth to the existing plates, but should have in every case advised *new dentures*. Thirdly, that a dentist should be found who would rather insert "a large gold plate" for £5 5s. than make an honest alteration to an old one, which could not help being more remunerative.

I remain, &c.,

AN "ORDINARY" DENTIST.

The Birmingham Dental School.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—My attention has been called to a letter in your issue of last month under the above heading. Mr. Huxley's strictures

appearing to call for some answer, perhaps you will allow me to reply in your columns.

Mr. Huxley commences by saying that the Annotations in your August number are misleading. I must say that I fail to see in what way they are so, as they are a brief account of what occurred at the meetings in question, and no more. It is stated as a grievance, that no representative of the Dental Hospital acts as such on the Council of this College; but precisely the same statement would apply in the case of the Medical Hospitals or of the professorial body, neither of which have direct acknowledged representatives on the Council, nor any voice in the election of lecturers on medical subjects.

Each member of the Council, be he physician, dentist, or professor, is supposed to act individually and on his own responsibility. In order, however, that the abstract subject of dentistry should not be without a representative, Mr. Charles Sims, Professor of Dental Surgery in the College, and till recently senior surgeon to the Dental Hospital, was placed upon the Council. Surely Mr. Huxley is not prepared to argue that Professor Sims is incapable of advising the Council as to their action in dental matters.

The "promiscuous meeting" of which Mr. Huxley speaks, and of which, by the way, he expressed his approval in a letter read thereat, consisted only of those *directly* interested in dental education. The Surgical Committee of the Dental Hospital consists of the consulting surgeons (two), dental surgeons (four), and *anæsthetists* (six). Which of these is the more "promiscuous" gathering I think it is not difficult to decide, unless Mr. Huxley is prepared to maintain that anæsthetists are more likely to know what is good for dental students than assistant dental surgeons and house surgeons—a line of argument into which I shall not follow him. It is at least encouraging to find that Mr. Huxley approves of the appointment of a dental tutor. It will be an incitement to the Board to go on with its work, and endeavour to merit even a larger measure of approval from Mr. Huxley.

From the tone of the letter, let me say in conclusion, Mr. Huxley would appear to look upon the Dental Hospital as essential to the existence of a Dental Faculty in this College. This is quite a mistake. The College could easily provide for its students elsewhere, and (I speak unofficially) would, no doubt, not hesitate to do so should occasion arise to compel them to such an action.

I am, yours faithfully,
BERTRAM C. A. WINDLE, M.D.,
Professor of Anatomy and Hon. Sec. to the Queen's College.

The Address at Chester.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—I wish to assure you, that it is not from any want of courtesy to Mr. Thomas Underwood, that I do not reply to his letter which appeared in your last issue. I recognize in him one whose services to the first British Dental Association (the college of Dentists) were very constant and valuable, even to the acceptance of the thankless office of arranging for that capitulation which carried with it, for awhile, all the hopes and just aspirations of an ancient and honourable profession.

In this discussion I have endeavoured to avoid the use of names and personalities ; for I, and the majority of the British Dental Association who think with me, have no dispute with any individual ; it is with a class and principles that we wage war, and intend to " fight without the gloves " until with increased provincial forces, the present, the second British Dental Association shall have secured a Dental Council, by law established, which shall have the management of the affairs of the dental profession.

I sincerely hope that Mr. Thomas Underwood will live to take his rightful position in that council, with other veterans who hold the L.D.S., the only dental degree in the United Kingdom.

As I shall address my dental brethren before the end of the year, in another form, I will not trespass more upon your valuable space,

I am, faithfully yours,

FRED. BULLIN.

Oct. 3rd, 1887.

TO THE EDITOR OF THE " JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—If a reply to Mr. Ladmore would tend to promote the unity of the profession and add to the strength of the British Dental Association, most gladly would I undertake the work. My object in writing previously was to express my individual opinion, I never claimed to be representative. I am quite sure that Mr. Bullin, Mr. Ladmore, and myself are at one in wishing and labouring for an advance all along the line, but if a correspondence of this kind be continued—*cui bono*? We agree in so much that I am not disposed to use magnifying glasses to the points wherein we differ. Hatchets are sometimes better buried than used.

I remain, dear Sir,

Yours truly,

J. CHAS. STOREY.

OBITUARY NOTICE.

WE regret to announce the death, on September 13th, at Dumfries of ex-Baillie Wood, surgeon dentist. Mr. Wood had been for years on the Town Council, and had served his fellow-townsmen as baillie on many occasions. He had also compiled a small work on dental surgery. Mr. Wood was forty-seven years of age.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their subscriptions were due in JANUARY last, and are requested either to remit them direct to the Treasurer, at 40, Leicester Square, or if more convenient, to pay them through their bankers, or through the agency of one of the Dental Depots, and so save unnecessary postage, &c., in applying for the same.

SPECIAL NOTICE.—All communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

THE JOURNAL
OF THE
BRITISH DENTAL ASSOCIATION
A
MONTHLY REVIEW OF DENTAL SURGERY.

No. II.

NOVEMBER 15, 1887.

VOL. VIII.

The British Dental Association in the Provinces.

OUR readers will find at another page of this issue, a full account of a recent meeting of the Midland Branch at Lancaster. At this meeting, a great deal was said which will interest the readers of this Journal ; but the principle object of the present article is to discuss a vigorous address by Mr. Waite, of Liverpool, in which he appeals to his provincial brethren to awake to a sense of "their power, their privilege, and their prerogative" in connection with our Association. He reminds them, that if direct effort must be centralized, personal influence ought to be widely diffused ; it is this personal interest which he endeavours to arouse, and it will be our object to assist him, and to second his efforts by every means in our power.

Mr. Waite's first point is that if the Association is to do any good, we must increase our numbers, and consequently our wealth and our influence. There are abuses to be corrected, and violations of the law to be dealt with, but so long as a large number of those who suffer most from these evils withhold their support and slumber in discontented isolation, it is always difficult, and sometimes impossible, to cope with such offences. Mr. Waite is of opinion that any considerable increase in our numbers must for the future be looked for from the provinces ; if this is so, let our provincial friends bestir themselves and, imitating the energy of the Secretary of the Midland Branch, communicate their enthusiasm to their wavering neighbours and enlarge our boundaries.

Our numbers are confessedly by no means what we hope to see them some day ; we must increase, and, seeing that this Journal has a wide circulation among those who have not yet become members of the Association, we trust many of these gentlemen will come to see the matter in this light and, by doubling their journal subscription, become full members of the Association with all the privileges of membership. We have just under 170 London members, the next on the list is Glasgow with 25, while there are only eight other cities with double figures, and the aggregate of the nine is only 140. Let us now look at our representation from another point of view, namely, the proportion existing between the number of dentists and the number of members of the Association, in the principal cities of the United Kingdom. Premising that all such calculations are liable to small errors, we have every reason to suppose the authorities from whom we derive our figures to be fairly exact. We include as dentists, all the 5,000 who are quoted by Mr. Waite, although, no doubt there are some among them who are not eligible for election to the Association.

London possesses	511	dentists, of whom	166	are members of B.D.A.	about	$\frac{1}{3}$
Manchester	121	„	15	„	„	$\frac{1}{3}$
Liverpool	83	„	17	„	„	nearly $\frac{1}{3}$
Glasgow	68	„	25	„	„	between $\frac{1}{2}$ & $\frac{1}{3}$
Birmingham	66	„	12	„	„	$\frac{1}{3}$ & $\frac{1}{4}$
Edinburgh	48	„	20	„	„	nearly $\frac{1}{3}$
Dublin	46	„	15	„	„	about $\frac{1}{3}$
Brighton	41	„	17	„	„	a little less than $\frac{1}{2}$
Norwich	20	„	6	„	„	$\frac{1}{3}$
Plymouth	18	„	9	„	„	exactly $\frac{1}{3}$

These figures more than bear out Mr. Waite's argument. They prove that there is an ample residue to be converted everywhere—nearly 350 in London alone—but while there is everywhere need for activity on the part of the members of the Association, that need is greater at Manchester, Liverpool, and Birmingham, than elsewhere. For although these are the representative cities of the oldest Branch, yet their average is the lowest; whilst Brighton, the representative town of what is almost the youngest Branch, stands higher than London. It is clear, therefore, even after making allowance for all possible inaccuracies, that the dentists of the Midlands have not joined the Association in such numbers as the dentists in other districts; and this, notwithstanding that they have among them men of such indomitable energy and unquestioned ability as their Hon. Secretary.

The first part of Mr. Waite's address, therefore, which appeals with such clear straightforward reasoning to all who waver and hold aloof to throw in their lot with us, we would very specially commend to those of our readers who are not already members of the Association. Whether they join us or not, they must necessarily share many of the benefits of our action, but we shall be much more likely to achieve triumphant success if they do join us.

The second portion of the address is also an appeal to the members of the Association who practise in the provinces, to bestir themselves, but in a different fashion. Mr.

Waite tells them that their first duty is to increase the membership and spread the principles of the Association; but their duties do not end here. There is no interest so keen as that which springs from responsibility; they should, therefore, strive to take an active part in the government of the Association. Those who are members of the Representative Board should attend its meetings and make their voices heard. The various acting committees, such as the Business Committee and the Finance Committee, are open to all who have acquired the confidence of the Association in such matters, and they would be the better, Mr. Waite suggests, for a leaven of provincial opinion. In all these suggestions there is obvious truth and common sense; these committees would unquestionably benefit by, and their present members would welcome, the addition of this element to their composition. How far it is convenient, or even possible, to overcome the difficulties of time and distance is a matter upon which Mr. Waite himself has doubts. If such difficulties can be adjusted in such a manner that provincial members can really attend these meetings, they may rest assured that their welcome will be cordial and their opinions accorded full weight. As a practical matter of fact, it is difficult to see why the secretaries of Branches should not always attend meetings of the Business Committee when matters in which they happen to be interested are to be discussed—that is, if these gentlemen are willing to undertake the task.

Of course these committees must inevitably meet in London, until some city of equal importance arises in the United Kingdom; but London is a place that most Englishmen visit at times and, therefore, such visits might be timed to fit in with the meetings of the Business Committee.

With regard to the Journal, we are genuinely sorry that we have failed to satisfy the ideal of Mr. Waite ; it is not from exclusiveness upon the part of the Publishing Committee. We have endeavoured to obtain local information and to be kept *au courant* with local news, and have approached a number of provincial members of distinction upon the subject ; many have promised, but very few have really helped us. The committee have felt very strongly how the Journal would gain in interest and representative character by the admixture of provincial opinion, and the sub-editor has asked for such information. In some quarters the response has been a monthly budget of news, but in many there has been little or no response. The words of Mr. Waite will, perhaps, have more influence, and the sub-editor will look forward in future to a *bondâ fide* assistance in this matter from local secretaries, or from any members who have any news to send.

We have spoken unreservedly our conviction that Mr. Waite's earnest appeal is a move in the right direction. If between the lines we fancy we perceive a certain sense of soreness against those of us who are working and have worked here in London in the same cause, we think it may exist because Mr. Waite and his friends have misread us, as he fancies, no doubt with reason, that we have misread them. At any rate, of one thing we are sure, that the more we know of each other and work together, the more we shall appreciate each other's zeal in our common cause, and the less possible it will become for misunderstandings to arise. The welfare of the Association is our only object, and we desire no cliques or parties, but only the "commonwealth" of all. The representatives of the great provincial branches have seats at our councils, and we most sincerely hope that they

will not turn a deaf ear to Mr. Waite's appeal, and that the Midland cities will soon make a better show in respect to the proportion between their dental population and their representation in our list of members.

Lady Dentists.

WHILE there are many "causes" which, in the imagination of their respective advocates, are making progress in this country, one only—that of the professional lady—is progressing by common consent of advocates and opponents alike. Indeed, it may be open to doubt whether the word progress is forcible enough adequately to describe the manner in which the fair sex have of late years overcome the obstacles placed in their pathway, and brought within appreciable distance the time when, following the example of the emperor who is said to have sighed because there were no more worlds to conquer, they may have to lament in gentle, if not bitter, tones the absence of any more professions into which to gain an entrance. The admission of ladies as students at the National Dental Hospital practically removes all previously existing barriers to their education for a profession which the law allows them to practice, but for which there has been hitherto, in their case, no satisfactory means of education available. The ladies have won another victory, and the ruling powers in Great Portland Street have distinguished themselves before the world. The ladies will doubtless profit by their success, and the committee of the hospital will reap that reward which commonly attaches to a power to appreciate the logic of events and to estimate the facts of finance.

It were of course altogether idle, seeing that the medical profession is now open to women, to take exception to their practising a calling which will indeed have for them

some special difficulties, but which is, at any rate, free from certain serious drawbacks attaching to medicine and surgery. Nor does the present moment seem altogether an inopportune one for their new departure. The opening for medical women in the East is a very large one, and the value of a knowledge of dentistry to those ladies who are going to different parts of our Indian empire must be very great. Here, at least, there is a special field for the exercise by them of any skill in dentistry which any number of them may obtain.

We shall not be surprised to learn that the profession has attractions for many ladies who have cherished more than a half-desire to study medicine and surgery, but who have been debarred by a consideration of certain conditions naturally distasteful to them. Dentistry may seem to offer some of the opportunities which attracted them, without the disadvantages which made them hesitate. Yet there are conditions appertaining to dental surgery which make it at least doubtful if the calling is one in which women are likely generally to succeed. Samuel Johnson's advice to a man not to do a thing merely to show that he could not do it, is sound advice; and though doubtless ladies will succeed in the practice of dentistry beyond the point at which they could be held to illustrate the truth of this saying, yet it is more than doubtful if their success will be so complete and general as to justify the hopes raised by the opening of a new and apparently agreeable sphere of labour to the sex.

It will not, of course, be thought for a moment that we question woman's ability to acquire the necessary knowledge and skill. Fortunately for mankind, the average ability absolutely requisite for the practice of any profession is beyond the reach of only a few. The lady student may, with perfect modesty, feel herself as competent as did

one of her sisters, who, answering an opponent who questioned her fitness to exercise the franchise, said: "It will doubtless surprise you, sir, but neither the knowledge nor the intelligence of the average elector terrifies me." The hindrance to perfect success will lie purely and simply in the very trying physical conditions of dental work. To stand over a chair for many hours continually exercising slight muscular effort, and subject, in a proportion of cases at least, to some unpleasant influences, is a much more serious strain than at first sight appears. Under it a proportion of men sooner or later fail. The extent of this strain is, of course, commensurate with the success that attends the practitioner, and we can imagine that the advocate of the fair sex may urge that, whatever her skill might place within her reach, the natural modesty of her desires, and her indifference to that wealth which proves so potent a spell for men, will allow her many opportunities for repose, and yet enable her to satisfy her utmost needs. This must, both in truth and courtesy, be granted; and it must further be admitted that there is a law everywhere present compelling mortals to take gain and loss together. The sovereign who sent round the world in quest of the shirt of the happiest man, found the man in Ireland; but, alas! he boasted not of the possession of the garment.

It ought, also, in fairness to be admitted that women have some qualities fitting them at least for that exercise of the conservative treatment of dental disease which marks the present time. Delicacy of touch and patience, and a sympathy which may tell for something with children, are among these. Even a weakness of wrist—provided it present no real difficulty—may sometimes stand the lady practitioner in good stead with a small number of nervous patients, who may find the impression that the operator has not a giant's strength more consoling than the hope that she will not use it after the manner of a giant.

On the whole, it seems to us that the opportunity afforded to women to learn the art of dentistry is one which may prove of some value, and can be productive of little ill, save, perhaps, an occasional disappointment. There are doubtless some sensitive souls who, looking at a body of lady students, will shudder at the thought of their transformation into operators. But there is at least one record of a gentleman who, looking on a batch of Eton scholars, shuddered in like manner at a vision of their fate, and exclaimed, "How sad to think that these fine, ingenuous lads will, in a few years, be changed into frivolous members of Parliament." The consolation is that in the one case the study of blue-books may be made as profitable as the making of Latin verse; and that in the other there is as great an opportunity for the exhibition of grace in the using of an electric mallet as in the handling of a sometimes more fateful fan.

ASSOCIATION INTELLIGENCE.

Representative Board Meeting.

A MEETING of the Representative Board will be held at 40, Leicester Square, W.C., on Saturday, December 3rd, at three o'clock.

Annual General Meeting (*continued*).

Friday, August 19th.

The PRESIDENT called on Mr. E. LLOYD WILLIAMS to read his paper on:—

The Value of Antiseptics in Dental Surgery.

Mr. PRESIDENT AND GENTLEMEN,—I make no apology for introducing this subject before the Association, because I am convinced of its importance, not only in its purely scientific aspects, but more particularly in its practical bearing upon the every-day work of modern dentistry; and to the latter consideration I intend addressing myself exclusively.

There is probably no one of those listening to me now but uses antiseptics in some form or other ; but whether we all work on consistent and sound principles of antisepticism is quite another thing altogether. It will be my endeavour, in so far as the limits of a short paper permit, to touch upon the broad principles which should rule over our practice, and to suggest a few special points of treatment which have been found valuable, rather than to formulate any hard and fast laws, or dogmatize upon pet theories and particular methods.

The debt of modern surgery to Sir Joseph Lister is difficult to gauge ; but we are apt to lose sight of the fact that we owe less to what is known as strict "Listerism," than to the great doctrine of "cleanliness" which underlies all the teaching of that eminent surgeon. The fact that to-day modern surgery can boast of operative triumphs undreamt of, still less attempted, by the practitioners of but a short while ago, and this in spite of much variety of procedure, can only be accounted for in one way. The great principle which regulates all operations and which has been the very foundation of success, is "absolute surgical cleanliness." I fear that as dental surgeons we have even yet scarcely grasped the importance of this principle. It is true that our sphere of surgical work is limited, that we are concerned for the most part with hard tissues which we look upon as being comparatively indifferent to external conditions ; but we must not forget that even in the simplest operation we have to do with living material, not to speak of those branches of our work where we are brought face to face with ordinary surgical conditions, and where the result of our treatment is wrapped up with the constitutional welfare or woe of our patients. Nature stands more insult in the mouth than in any other part of the body, and her long-suffering has admitted of much reckless treatment with comparative impunity. There is probably no operation on any part of the human body commensurate with that of wrenching a tooth from its bony socket where the repair is so rapid and the after effects so slight. If this were not so, we should probably approach the mouth with a far greater degree of caution, and should employ every possible antiseptic precaution for procuring a minimum of local and constitutional disturbance. But it yet remains to be proved how far we can improve upon our present results by being more cautious ; and I feel confident that in special cases antisepticism must lead to more brilliant results if carried out with

thoroughness. There is another side to the question which must not be lost sight of. It is well for us that there are so few recorded cases of inoculation from the mouth, but that is no reason why we should employ dirty instruments. It is idle to tell me that we run no risk. If we take the case of syphilis alone and remember that the virus may be propagated through the medium of the secretions of all the secondary eruptive lesions, especially of the mucous patches and various forms of ulceration so common about the mouth, as well as the blood during the entire period of the secondary symptoms, it ought surely to teach us caution. And this is a point which affects us as operators equally with our patients, for many a medical man has sacrificed his health through contracting syphilis from a patient; and I understand that we as dental surgeons have not been entirely free from the same terrible accident. How far the absorptive properties of the mucous membrane of the mouth are concerned in the spread of specific contagious diseases would be a question at once difficult and yet interesting to follow. How far local suppurative conditions of the mouth are communicable through the medium of dirty instruments is another question, which would doubtless be followed with much misgiving by the majority of dentists.

Cleanliness then should be an elementary, but essential, principle of our practice. All our instruments should be not only clean, but where at all likely to come into contact with the soft tissues absolutely aseptic. I have for some years adopted the practice of cleaning *all* instruments with a one in twenty solution of carbolic acid; all the members of my outfit have their antiseptic bath, from mouth mirror down to rubber dam. All files, scalers, excavators, &c., likely to come into direct contact with the soft tissues are dipped into carbolic oil or solution *immediately* before being used. Nerve extractors and bristles are dipped in pure carbolic acid just prior to using. The same portion of waxed silk or twine is never used for a second person; nor the same wedge made to do duty for half a dozen people. I will not weary you with further details; suffice it to say that as far as possible I carry out these antiseptic precautions down to the smallest particular. I do not profess to obtain more brilliant results than my brethren who think all these precautions superfluous; but I feel convinced that I am on the winning side, and though the differentiation of result be slow to assert itself, yet the

principle must be right, and the revolution which is taking place in this direction in every branch of surgery can scarcely be allowed to leave our own specialty in the wake. I put the question personally to every member who listens to me, and say, "Would you allow your own dentist to plunge a nerve bristle fresh from its work on a putrid pulp straight into the pulp of one of your teeth?" or, "Should you sit down calmly and have your teeth scaled with instruments which last did their work in the mouth of a secondary syphilide?" If not, the moral is obvious. Shall we continue to drum into our patients' ears the gospel of cleanliness, and yet refuse to apply its commonest tenets to our own professional practice?

So much for the general principle which is prophylactic rather than remedial, but we must now pass on to consider in what special ways the use of antiseptics may prove useful to us in our work. It is quite unnecessary to define the strict meaning of the term "antiseptics," or to attempt to differentiate between "antiseptics" and "disinfectants." The words have now for all practical purposes become interchangeable, and in this sense will be used in anything further I may have to say. Neither do I intend to tell you what you already know with regard to the important part played by micro-organisms in putrefactive changes, or enumerate the host of agents at our command to combat these, marshalling them before you according to their respective germicidal powers. My further object is much more simple, and yet may not fail to be of some little practical importance.

The commonest operation which we have to perform is the preparation of cavities for the insertion of fillings, and beyond the mechanical details and immediate surgical considerations presented, we have always to contend with a septic condition of tissue. In simple cases where we can cut well beyond the infected area, the condition gives no trouble; but how often does this become difficult if not impossible? In these difficult cavities disinfectants must be of value. One of the essential conditions of putrefactive change in any material is the presence of water, and, no matter how favourable the other conditions may be, absolute dryness will protect the most susceptible bodies from putrefaction for an indefinite period *and even arrest the process when already begun*. Heat is undoubtedly the best disinfectant we possess; and although a very high temperature is of course inadmissible in the mouth, yet failing to use it in its full therapeutic power we can still utilise it in producing a condition of

dryness which is not without its proper value. I believe that the consistent use of the hot-air syringe is one of the operative reforms which is most to be desired. The air itself may be rendered more pleasant and at least *aseptic* by dropping into the rubber bulb of the syringe a few drops of eugenol or eucalyptus oil ; or this can be accomplished more satisfactorily by having a special disinfection chamber constructed in the base of the nozzle which can be easily charged from time to time. As a further precaution any unsound dentine, left in the immediate neighbourhood of the pulp for instance, having been thoroughly dried, should be painted with an antiseptic varnish and then finally dried with a current of warm air. For this purpose I have used for a long time a particularly good varnish made of saturated solution of iodol in absolute alcohol one part, Hubbard's negative varnish four parts. The only objection to it is its liability to discolouration after being kept for a time, and for this reason beta naphthol may be substituted for the iodol with advantage. The use of an antiseptic varnish of this description is especially indicated in those cases of soft rapid caries of children's teeth where, for obvious reasons, excavation must often be far from thorough.

Next to the common necessity for the disinfection of cavities comes the vexed question of treating the varied and complex septic conditions which arise in connection with so-called dead teeth. Let no one shudder and suppose that I am going to weary you with a long dissertation on dead teeth. My only object in mentioning the matter is to discuss very briefly the principle which governs ordinary treatment, and to enquire whether this be rational and wise. I was taught when a student to fill all nerve canals in connection with teeth found to be dead with wet carbolic acid, or other antiseptic dressings, and complete the operation with a good tight plug of mastic on wool. This was to be persevered in until the dressings ceased to smell disagreeably, when a fresh relay of carbolic dressings were inserted and left *permanently* under any filling which was then put in. We did not know exactly what the magic of our treatment was, but we felt that *the tooth* had been treated antiseptically, and that we must be *doing the right thing*. I venture to assert that this is the treatment carried out by the bulk of dental surgeons to-day, and not only practised but taught to the present race of dental students. Is it rational and sound? I think not. Let us take a typical case. We have to deal with a more or less limited area of inflamed

tissue, which has broken down around the apex of the root of an affected tooth, and for want of other vent, the discharge finds exit by the pulp canal. The treatment indicated is scarcely to dam up the discharge with wet dressings, whether antiseptic or not. We shall surely assist nature rather by mopping up the discharge, and doing this under the best antiseptic conditions possible. This is the principle of treatment which I have adopted for some considerable time, and which I venture to submit is sound in theory and valuable in practice. Having dried out the canals as thoroughly as possible, I put in dressings of antiseptic paper wound round a smooth Donaldson bristle, previously oiled and wiped, filling up a portion of the pulp chamber, if deep, with a loose plug of paper and sealing with antiseptic wax. For filling in the tooth cavity, I prefer gutta percha containing ten per cent. of iodol. I consider the tooth is now placed under the most favourable antiseptic conditions, and the dressing may, of course, be changed at the discretion of the operator. I quite admit the difficulty of carrying out the treatment in all cases, and deplore, in common with my brethren, cases of failure from time to time; but on the whole, and compared with former methods, I consider the results good. The paper can be made by saturating Japanese bibulous paper in a ten per cent. ethereal solution of iodol or iodoform, and allowing it to evaporate thoroughly. It can also be coloured with turmeric to show the amount of discharge by the alkaline reaction of the pus, the only objection being the liability of discolouration of the fingers in manipulation. The wax referred to, which is also a capital permanent fang filling applied on paper, is made from a formula which I published last year, and is composed of:—

Paraffin	...	...	...	...	...	ijj
Spermaceti	...	...	...	...	...
Yellow wax, āā	...	...	...	...	...	3ij
Iodol...	...	...	...	...	...	3j
Carmine	...	...	...	...	...	gr.j

The dressings can be obtained from the Dental Manufacturing Co.

There is one other point which I wish to consider, and that is the question of how far the antiseptic qualities of a filling may influence the well-being of a tooth—more especially if it be dead or very extensively carious. Where a gold or osteo filling has been inserted in a properly excavated and thoroughly dry cavity,

provided the plug is mechanically sound, all goes on well. But when we come to amalgams the case is altogether different, for it becomes next to impossible to make a water-tight plug. I believe that the reason why so many teeth are saved by amalgams is due rather to the chemical reaction between the dentine and the metals employed, than to any mechanical excellence of the plug which is too often only conspicuous by its absence. We are all familiar with the antiseptic properties of copper salts, and with the fact that all amalgams which are essentially tooth-saving, contain copper in a greater or lesser degree. This is especially true of Sullivan's amalgam. The lesson which we may learn from these familiar facts is, that whilst we strive to excel in putting in fillings which shall become more and more mechanically perfect we should not forget that the arrest of caries will be promoted by certain auxiliary methods which ought not to be neglected.

I have already referred to the use of hot air and antiseptic varnish; there yet remains the question whether it be worth while to render our temporary fillings antiseptic. For my own part I consider this highly advisable, especially in the treatment of dead teeth. For some time past I have added ten per cent. of iodol to gutta percha and osteo fillings with much advantage, as I think. The drug is neither unpleasant nor injurious in the mouth; and, although the gutta percha is perhaps made a trifle perishable, I am inclined to believe from a long series of experiments in the mouth, that oxy-phosphates treated in this way do their work well. I have only mentioned iodol so often, not because I am prejudiced in its favour as against all other antiseptics, but for the reason that I believe it to fulfil several special requirements for the mouth, amongst which one is bound to recognise its germicidal, non-injurious, tasteless, and sedative properties.

The PRESIDENT: We have had a very clear statement of Mr. Williams's views of a subject in which we have a very decided interest, and I hope it will lead to a very useful and satisfactory discussion. We shall be very much pleased to hear the views of any gentlemen.

Mr. A. KIRBY: I am not prepared to enter into a discussion upon the interesting paper, but one point I must take exception to. Mr. Williams said it was not possible to make an air or water-tight stopping. I think that wants very great qualification. There

is nothing to prevent an air-tight stopping, and if you use an amalgam, mixed in two separate portions, the first soft and the second tolerably dry, you will find it is perfectly water-tight. The fact can be demonstrated with a bar of amalgam an inch long; you cannot detect a change in a bar of that length, and if you cannot you are not likely to do so in one $\frac{3}{16}$ of an inch in diameter.

Mr. GEORGE BRUNTON: Might I ask Mr. Williams why he mixes the antiseptics through the body of the filling? Is it not sufficient to line the tooth with it and then fill in?

Mr. COFFIN (London): I should like to ask Mr. Williams if he has satisfied himself by alternative experiments, that the addition of an antiseptic of resinous varnish is any advantage?

Mr. CHARLES S. TOMES: One point occurs to me about what Mr. Lloyd Williams has said, and that is as to the advisability of using wax that has been rendered septic. I have used wax, as filling, very largely, using it alone, and running the wax down the roots. I have used it also in conjunction with little tiny slips of wood, and in connection with wool and paper, but I rather come to the conclusion that wax is an unreliable material,—for one thing, it disappears. Fill the root with wax or paraffin, or with mixture of paraffin and wax, and seal it up with an osteo or gutta-percha filling, or an amalgam filling, and if you seal it with a temporary filling and open it up you will find that the wax is all gone. It seems to have soaked into the dead tooth, or something or other has happened to it, and you frequently find the tooth in a satisfactory condition as regards absence of any smell of decomposition; the root, which was filled has become empty, and sometimes the cavity so left has become filled with offensive material. I doubt whether wax is a good material to use in the root, and when I use wax now, I commonly use it with ordinary binding wire, running in some wax with a hot instrument and just as much wire as will go in, but I do not like wax with an absorbing material like paper or wool. I forget at the moment by whom it has been used, but I certainly have met with the statement, that wax used in ordinary surgery is a material which becomes very aseptic, and causes a nasty porous, stinking matter. I think Mr. Williams's suggestion that we ought to use a porous dressing in the early preparation of a suppurating tooth, is a very valuable one.

Mr. R. F. H. KING: With regard to the question as to the antiseptics that should be used, Mr. Lloyd Williams has told us

very clearly that the best is dryness. Where a cavity is perfectly dry, there, it seems to me, that no antiseptics are required, if you are going to hermetically seal up that cavity. I have tried some experiments in that matter myself, and I find nothing so good as a thin solution of gutta-percha in chloroform. Stopping up a cavity you have to use it thicker to allow the chloroform to evaporate, but you must first have your cavity dry, and then not only the nerve canal filled up, but all the inter-spaces saturated with the gutta-percha, and I get the thin solution of the gutta-percha dissolved with chloroform and some aniline ink in it, and I put the solution into the nerve canal. The next day I get a section of it and grind it with a piece of cork on the stone, and then I put it under the microscope, and I find the gutta-percha has penetrated into the tooth a considerable distance. As to the amalgam stoppings it is a very great question whether any stopping whatever is water-tight. It is difficult to tell, but whether they are or not I think is an open question, because if you put any stopping under a severe test of ink, you will find that the ink has penetrated somewhere, if ever so little. On one occasion I extracted a tooth from a man who smoked a great deal; on cutting the tooth in halves I could trace the tobacco ramifying into it and meeting on each side, so the stopping was not water-tight.

Dr. STACK: The points that strike me in this paper are the treatment of the amalgams in the mouth, and the treatment of the roots of the teeth. I shall limit my remarks to the roots of the six front teeth, in the treatment of which there is no great difficulty if there is any life in them. If the death of the tooth is complete, and if putrefaction has set in, the whole condition is changed, and you come to deal with a tissue that is practically inaccessible to the mechanical interference of your instruments. Your treatment then becomes a treatment more or less by drugs; and I believe the proper course in these six front teeth is to clear them out thoroughly, and fill them to the end, and if an abscess is going to happen in the neighbourhood, let it happen, and try to promote it, and treat it through the gum. Of course there is a certain contingency that the abscess may point in an awkward direction, but the chance is certainly a small one, and the certainty of your treatment if you succeed in filling the root, fully producing the abscess, and treating it through the gum, is such that I have adopted it for the last six years. As regards the cleansing of the roots, the treatment I adopt is this; supposing I have

presented to me a root in the front of the mouth, in which there is a large amount of decomposition, my first treatment is to open it freely towards the mouth, and wash everything away with a little water, and then having the thing clean, I leave it open. Having done that for two visits, I take a piece of gutta-percha and chloroform, and push it into the apex of the root. When I hope I have got it there, I place, at the orifice of that root, towards the mouth, the nozzle of the hot-air syringe. The rationale of that is this:—the moment you heat all the air of the tubes of that tooth, and push a little of the antiseptic fluid in, it is soaked up as the air cools, into every dentinal tube in it. After doing that once or twice I fill the root with a solution of creosote and chloroform. Next day patient may come with an abscess at the end of that root, but I promote that abscess and see if it can be brought through the gum, and know that the cure will be complete.

Mr. STIRLING: Mr. Williams said he plugged the tooth charged with 60 per cent. of eugenol and iodol, but if it is evaporated what is the use of the iodol in the tooth. I think we require no iodol on the plug at all. I don't think there is any use in putting in cotton-wool. If, after having cleaned the tooth with potash or soda, we force pure carbolic acid up, we require no cotton-wool. I have had very great satisfaction in working in that way. With regard to the amalgam stoppings being water-tight, I have seen two or three cases where the amalgam stoppings were water tight, but it depends upon how they have been put in.

Mr. COFFIN: I should like to refer to one point—the hot-air syringe. I had one with a little arrangement whereby the air passed through or over cotton-wool, which I used to saturate with an antiseptic to make the air agreeable, and I used oil of cloves with this result, that some non-volatile portion of the oil was carried over, or that the walls of the cavity afterwards were not so dry and adhesive with the adhesive fillings as when hot-air was used alone, and I think that is a point that should be borne in mind. Possibly a perfectly volatile antiseptic may be used, or eucalyptus oil. I mention this as a matter of caution, and I should think that the best way of treating the air, which evidently ought to be treated in some way, would be to heat it very strongly only before using it.

Mr. KLUHT (London): I consider that we ought, under all circumstances, to be capable of avoiding the state of things which Dr. Stack seems to think can easily be got over. I think there

is nothing more trying to a man than to feel that, in all probability, his patient will have to go through the suffering, and sometimes the serious consequences of an alveolar abscess. I would like to accentuate one point, the great necessity of having perfect dryness, for I think where so many have failed in the past has been in using antiseptics freely, and introducing moisture. I find in the first visit nothing is necessary but absorbing all moisture and all impure substances at the roots, and after that visit the other treatment is pretty straightforward, and I think an abscess need not occur in most cases.

Mr. KIRBY: I think the matter of the exclusion of moisture is a very important point. Readers of Professor D. Tyndall's book on Dust and Disease will recognize how very difficult it is to produce germination in a dry place. The subject of a more powerful antiseptic has been alluded to by Dr. Stack, and he has used bi-chloride of mercury. I have not used it, but I have used arsenic, in the manner advised by Mr. Coleman, and no pus has formed. It is a doubtful question whether eucalyptus is an antiseptic at all, and my own opinion is that carbolic acid is very much more powerful than is supposed to be the case. With antiseptics of the kind of bi-chloride of mercury, we may rely on the destruction of germs that might be formed in the tooth.

The PRESIDENT: Before calling upon Mr. Lloyd Williams to answer the questions, I should like to make a remark upon this subject, as I had a special interest in one little item in the paper, which has been taken notice of by one or two of the speakers, the possibility of making water-tight plugs. Mr. Williams wants us to give our attention to principles. I think it is a case in which we must have a tolerably clear understanding in respect to details before we can arrive at anything like certainty in respect to what we call principles. It is on record that various forms of amalgams can be filled into a cavity so as not only to be made water-tight but perfectly air-tight, under a pressure of two feet of water, which is one pound. Perhaps we have some members of the Odonto-chirurgical Society here who were present when this was demonstrated two or three years ago. I quite agree with Mr. King, who raised the question,—whether the tooth itself were water-tight? I have no hesitation in saying it is not. Water permeates through the whole substance of the tooth. We have evidence of that constantly in the application of the rubber-dam. A tooth which has been kept dry becomes a different colour, and

if you put it into water you bring it back to the mouth colour, and suppose we get the cavity perfectly dry, I quite believe that unless we fill it absolutely it will not so remain, because of this passage of fluid. Mr. Kirby called our attention to fillings being water-tight, and he stated that in my paper I said it was impossible to form water-tight amalgam fillings. What I said was that it was extremely difficult and almost impossible, and if Mr. Kirby will try a few experiments, soaking his amalgams manipulated in the ordinary way, in such a fluid as Draper's ink, he will, I think, be a little disappointed in the results.

Mr. KIRBY : I have done it all, and with a severe test under pressure of 7lbs. to the square inch.

Mr. WILLIAMS : I have been unfortunate in my experiments. Mr. Charles Tomes will bear me out in saying that in his own experiments the flask in which a full amalgam filling was put by the ordinary manipulation was unsuccessful if tested by such a fluid as Draper's ink. He found that the Bonfield method of putting in amalgams was the only one which gave perfect results. My object to-day was not to call attention to amalgam fillings or to the different manipulative methods of working them, but of one thing I am certain, that 99 out of every 100 amalgam fillings which are put into the mouth by the bulk of practitioners let water in freely and are not water-tight. Mr. Brunton wants to know whether there is any advantage in inserting any antiseptic into the body of the filling after the tooth cavity has been treated antiseptically, and I only say that, with regard to my own experience, I find that it is of absolute use, especially in dead teeth. I believe such a thing as a tooth which is soaked with septic matter cannot be rendered perfectly antiseptic at one visit. Where you have a dead tooth to treat, it must certainly be of advantage to have in the body of your filling an antiseptic which is practically at work the whole time. Mr. Tomes referred to wax as being an unreliable filling. I think there is some truth in what he says, although I cannot believe that wax, if sealed in thoroughly, can be altogether unreliable. I have taken dressings out which had been in some time, and they appeared to me to compare very favourably with others. With regard to dry dressings, I am glad to refer to them. I should have been glad to hear how many do try them, and I should be pleased if you would try some of the specimens of paper handed round. We have had a variety of directions with regard to fang fillings. Mr. King referred to gutta-percha and

chloroform. My great objection to a filling of that sort is that gutta-percha is one of the most absorbent materials, and, in connection with roots, one of the worst. Dr. Stack has described a very heroic treatment of abscess. This heroic treatment has been adopted by some of us from necessity where we have filled up the root thinking it was healthy, whereas it was not, and the result has been rather disastrous. The abscess has not appeared in two or three days, but in some weeks, and the tooth has had to be extracted owing to the extreme misery of the patient and his refusal to have anything but extraction. The line of discussion which Dr. Stack has also taken is that in connection with alveolar lesions the treatment is rather to disinfect the tooth than to treat the soft tissues there. My object is to treat the soft tissues which are beyond our reach, by assisting nature by absorbing under antiseptic conditions. With regard to the remarks of our President, of the passage of fluids through the tooth, I must confess my ignorance, for I have never made any experiments on the point.

Mr. A. KIRBY, Bedford, then read his paper

On the Application of Electricity to Dental Uses.

Mr. PRESIDENT,—In venturing to read before this Association a paper connected with such a highly-developed science as that of electricity, I am fully aware that I may be addressing some gentlemen whose knowledge of it is far greater than any I can pretend to possess; I must, therefore, ask their forbearance whilst I treat the matter in a somewhat practical manner, and with the use of as few technical terms and descriptions as the subject will allow.

At a period when some of us could hardly be called young in practice, our instruments were of a primitive, if not unsuitable kind, and it was even more difficult then than it is now, to obtain the carrying out of anything departing from the usually accepted forms. The need of something further was, however, strongly felt and many efforts were made to produce rotating mechanical motion in various ways; more than one of these being to my own knowledge in the direction of treadle engines. It was in America, however, where new ideas are more readily accepted, that the first engine of the kind was offered for sale. My own attention was directed to the subject at an early date, and after some more or less successful efforts, a burring engine was made of unique form

which I still continue to use. Invaluable as is the help of these engines, we are most of us aware that their use is attended with some discomfort, when the body has for any length of time to be balanced mainly upon one foot, whilst the other is engaged in operating the treadle. Hence, from the earliest days some operators employed water or other motors to propel their engines. It is not however, always convenient (even if a supply is at hand) to bring water into our operating rooms and the difficulty is rather greater in the case of other motors. The recent progress of electrical engineering has however presented to us several forms of electro-motors which have many points to recommend them; one being that power can be conveyed to them from a distance by small wires, but they all stop short of the perfection we should like to attain.

The speed of our ideal engine should, if possible, be under our control; as our fastest burr-points travel at an incredibly slow rate. An average-sized burr or Herbst's burnisher makes at a usual rate of working, a progress of about one mile in three-and-a-half *hours*; or in other words, moves about as fast as the pendulum of an old-fashioned kitchen clock.

It is also of the first importance that our engine should start and stop almost by our will and without help of either finger, hand or foot; except such movement as is usually necessary to control or direct our instrument; if otherwise, we might almost as well have to use our foot for the treading during the whole process. I have for some time been trying to obtain or produce such a motor, and shall perhaps best explain the means which have been taken towards accomplishing these ends, by giving a general description of the apparatus I have contrived and have in use, trusting to a view of the thing itself for its more complete comprehension.

DESCRIPTION OF MOTOR.

A heavy-footed stand is provided with an upright tube; into the tube is fitted a metal rod which rotates, but not too freely. To the upper end of the rod the motor is attached by a joint resembling the rising hinges which are sometimes put upon doors, to make them close by their own weight. The motor occupies a horizontal position, and its axis is prolonged into an arm or a flexible cable, to which is fixed the usual hand-piece; when not in use, the whole of this part moves quietly out of the way by the help of the rising hinge or joint. The motor itself may be

constructed on any of the well-known principles. The one I have in use is of the old Jacobi type, which is very convenient, if not the most powerful. One of the terminals of its wrapping is in electric contact with the frame or body, and consequently with the whole of the stand. The other terminal is insulated, and is connected to one of the leads from the battery; the second lead from the battery terminates in a pin which is stuck into a hole in the upright rod, from which it is, however, carefully insulated. The hinge on which the motor hangs, has been described as being in electrical contact with one end of the motor wrapping; it is also provided with a vertical spring or tongue of metal, which reaches as far down as the insulated pin of the battery lead (also described), but when the motor is out of use it does not touch it. As soon, however, as the hand-piece is made to approach near to the point on which it is desired to operate, this pin and the spring are by that action brought into contact, and the motor begins to work, and continues to do so until the instrument is removed away from the tooth. The action of the motor can be stopped by the foot at any time, but except in case of an accident this is never necessary.

In order to regulate the speed of the motor, governors are employed, suggested by those of the steam engine, from which, however, they differ entirely in detail; they act by intercepting the current when the speed becomes too great, and can be regulated at will to work at any required speed.

When arranged in this manner, the motor starts and stops automatically at the exact point we desire and revolves at the pace we consider most suitable. Of course the details may be varied very considerably. Thus, the engine may work through the medium of a cord like an ordinary burring engine; the only advantage of which would be that the instrument is capable of slipping when much resistance is offered, which I am informed is by some operators considered desirable.

MALLETS.

Another purpose for which electricity has been usefully employed, is in giving motion to mallets, for introducing and welding adhesive gold in tooth cavities; the advantage being that a quick effective blow is delivered at a high velocity, without the aid of an assistant or the employment of a finger or a foot in obtaining the same. The blow given is far less injurious to the

surrounding parts than that from a heavy hand mallet and far more effective than that from a spring, although it is not better than the blow given by a light hand-mallet, or by some others; such as my automatic pluggers, or by mallets on the pneumatic principle which I introduced some years ago, and which re-appear in various modified forms and under different names. In examining the electric mallets already introduced, one is at once impressed with the wish that they could be made lighter, and that the weight could be in a line with the instrument, so that they could be used in any position. With this view certain modifications were attempted. First, the form of magnet and its electrical proportions were altered,—next the spring “make and brake” was replaced by one which allows the keeper to rise to its full extent before contact is re-established; thus doing away with the necessity for a strong spring upon the keeper; then the finger contact maker was altered; the connexion to the battery leads was improved and made in the form of a universal joint, which does away with the risk of breakage; and finally, as a consequence of some of these alterations, a fixed instrument-holder was introduced, with a spring socket, which, whilst it retains the points firmly for use, allows them to be removed by the aid of the thumb and finger only. By these means (as well as being perfectly balanced) the weight of the instrument is reduced from something over six ozs. to the more manageable amount of something over two ozs.

Whilst engaged in carrying out these modifications, the idea occurred that it would be convenient to have a mallet which should be set in action by very slight pressure upon the point of the instrument and one was made, which continues to hammer only as long as the point is pressed or rather touched upon the gold. It is in action something like a “Snow and Lewis,” but gives a number of blows with the slightest pressure. It is in many ways a very convenient instrument.

It has further always appeared to me to be very desirable that we should be able in using a mallet to deliver an effective blow from behind forwards; so for instance, as to introduce a stopping firmly towards the anterior wall of a crown cavity in a lower molar, or into the distal cavity of a bicuspid or molar; for however we may try to make ourselves believe it, no amount of curve in a point, will change the direction of the force it carries from that of a *straight* line into *any other* line.

After making some experiments, I found that by causing the striker to impinge obliquely upon a short point, the direction of the force is changed in the same way that occurs when one billiard ball is made to strike obliquely upon another. By proceeding upon this principle, an instrument may be made which delivers its blow obliquely, or as it were round the corner : and I have with me an electric mallet in which blows of this kind are given whenever pressure is made upon its point.

LIGHTING.

The subject of electric lighting is one on which it is not necessary for me to say more than that we have the means for employing it as soon as we have obtained the current for our motors and our mallets.

BATTERIES.

Having very imperfectly described the instruments to be used, I must now endeavour as briefly as may be to say something of the ways in which we may obtain a supply of electric current to set them in motion. In spite of the difficulties and inconveniences attending their use, I believe that dentists who employ electricity generally obtain their supply from primary batteries, although no suitable battery of this kind is yet introduced or offered for sale, which produces anything approaching to a constant current. For working a motor this is not of so much consequence, since the governors make up entirely for its irregularity ; with the exception of the Laclanché all useable batteries require to have their plates removed from the acid when they are out of use. Almost all, too, require the use of a large bulk of caustic and dangerous acids, which is highly objectionable. For the mallet, however, no primary battery yet used is in any way satisfactory, their power falls off so rapidly, that although they may be too strong when first charged, they soon become too weak for effective action. This is evident enough to all users, but is made more striking if their working is tested from time to time by means of an ordinary galvanometer.

After these remarks, in which I am confirmed by Sprague and all other authorities, very little more need be said on the subject ; but it may be mentioned that the Grove, the Bunsen, and the bichromate are perhaps the best of the ordinary batteries. I have tried the Schanschieff, which promised well, but its plates cannot be left in the solution for more than the shortest time without serious

loss ; also the copper oxide battery which is too bulky, and has a very low E.M.F. I have also experimented to a limited extent with the Upward chlorine battery, which is the only departure from previously well-known forms, but unfortunately it yields a comparatively small current, although the E.M.F. is unusually high. The primary battery I have used most, is a modified Laclanché on a large scale ; and if made so as to be easily charged, it has considerable merits, and does not require the removal of the plates from the solution.

As before stated, none of these batteries (except perhaps the Upward chlorine), are suitable for use with the electric mallet, which must have a constant current if it is to work in the smallest degree satisfactorily ; we must therefore supply it by some other means, such as a storage battery, or some modification not yet in general use.

If a primary battery *must* be employed for working the mallet, it is best to intercept some of the current with a resistance coil when freshly charged, and to remove the coil after a short time.

Before proceeding to discuss the other sources of electric power, it is perhaps advisable to give some attention to the storage, or secondary battery, which does not *produce* electricity, but in a manner stores it up for use in a most convenient form, when it has been produced in an inconvenient one. By its aid tramcars and steamboats are propelled, and electric lighting is carried on whilst the generator is at rest. It can be charged from any suitable source of electricity, such as a dynamo or a primary battery, and can be taken away to be charged if convenient : this battery gives out its power exactly as we require it in a constant and equal current (which we can exactly proportion to our need), at an uniform pressure of two volts for each cell and it possesses the further advantage that it does not waste power by causing the heating of wires, as is the case in primary batteries with unsuitable-sized plates.

A battery of this kind will be used here for demonstration, and I am very glad to take the opportunity to mention that it has been very kindly lent for the occasion by Messrs. Muir, Mavor and Co., of Glasgow, to whom I feel myself very much indebted for the loan of the battery, as well as for its charge of electricity.

The other sources from which current can be advantageously obtained are, first, the dynamo, which is by far the most important and generally employed of any, furnishing as it does

practically the whole of the electric current which is used for lighting, electromotors, and all other uses except those on the smallest scale, for which the Leclanché is generally used.

A small dynamo may be used for dental purposes by attaching it to a water motor, as has already been done at my suggestion; or it may be driven by any other convenient motive power, and the current may be taken directly from it for our use in the surgery or it may be stored in a secondary battery. For supplying current for a mallet the storage battery is admirably adapted and specially fitted; it may be charged with a dynamo operated by a crank handle or by a treadle, as no great quantity is required for the purposes.

The last source of electricity which need be mentioned, as possibly being an important one to us, is the thermopile, which converts heat directly into electricity. Many varieties of apparatus have been tried for this purpose without much success. Noe's pile is in use in Germany for laboratory purposes, and is employed to produce electric light for examining cavities in the body, by Dr. Oliver, but its power is comparatively small.

Although a thermopile of French manufacture has also been included in the scientific instrument makers' lists, for some years it was difficult to obtain any reliable information about it. Recently, however, this has been materially improved and made for sale by M. Chaudron, of Paris, who states that it retains its power perfectly, after years of use, if it is not overheated in attempting to make it work past its proper limit. By the courtesy of Mr. Berly, of Herne Hill, I am able to exhibit an apparatus of this kind, which has been very generously lent for the occasion, and sent over specially for the purpose by M. Chaudron. It was set to work immediately on its arrival at my house, and in a few minutes the galvanometer showed that it was producing 1 ampere of current at an E.M.F. of 1 volt, which increased until first the mallet, then the motor, and finally both together were put in action, a result which was certainly more than could possibly have been anticipated from its appearance, and was, of course, altogether most highly satisfactory. When once properly heated the current may be taken off at pleasure, and when not required may be employed to charge an ordinary storage battery, so that it need not be wasted.

There is one point in connection with the supply and use of an electrical current which is very important to bear in mind,

namely, that the wires used in making our motors and mallets must always be proportioned to the battery or source from which we obtain our current. A motor which is wrapped so as to work well with a certain current, will fail altogether if supplied with current of unsuitable quantity or intensity. Therefore, in obtaining electric machinery we must be careful that the motor or using part is properly proportioned in relation to the battery or supplying apparatus.

The CHAIRMAN: I am afraid that we shall experience some of the difficulty we experienced yesterday, when we had not the opportunity of seeing the appliances to which Mr. Kirby has referred, but as there may be some points that may be discussed in the absence of the instrument, we shall be glad to hear any gentleman who wishes to take part in the discussion.

Mr. COFFIN: It is not easy to discuss instruments which one has not had the advantage of seeing, but so far as I can gather from the paper, I am very pleased to hear that Mr. Kirby is incorporating in a form of plugging instrument, what I am surprised the manufacturers hitherto have not considered. I do not know when the first electrical mallet was made, but at our section of the Congress in London I showed one that I made myself, in 1869, that, so far as I can ascertain, embodies the points that Mr. Kirby is also bringing out. The instrument was mechanically stopped, and by the adjustment of cords its axes could be revolved in every direction, and the blow was rather long, with an imitation of the hand-mallet—more than the present rapid smart blow. I attempted to reduce the weight by having the wire made of aluminium instead of copper, the conductivity of which is about the same. I also introduced a point contact to produce contact, but I abandoned that, because I found it was not so desirable to keep the point always on the cold silver, and better to have other forms of contact. It was regulated by clock-work. I mention all this not to claim priority, but simply to say that I do not use any form of electrical mallet. I hope that Mr. Kirby's paper may overcome some of the objections, and I think some regularity of blow more than is contained in the automatic make and break instruments must be devised on some simple method of regulating the intensity of the blow. I found my automatic make and break the most satisfactory way of getting the blow. As the blows were slower they were more powerful. This was made for me afterwards, in an improved form by Messrs. Elliot, the

electricians. The first one they charged me £75 for; it was made of aluminium and vulcanite, and was a piece of very useful work. In regard to an electrical engine, I think it is a misnomer to speak of an electrical engine when it is worked merely by electricity. I do not know when Dr. Green first made his engine, but about a couple of years after I made the mallet I first made an electrical engine, and that also could be revolved on its own axis, and it was comparatively light; but I came to the conclusion that it would not do, simply because the peculiar gyro action of it by the hand made it impossible to control the angular motion of it at high velocities. I am glad to hear that Mr. Kirby has had a satisfactory experience with this little thermopile. I have been promised one from Germany, it is a thermopile with an accumulator, which I am informed is very cheap, and in cold weather it will warm a small room, and working at one quarter of its range, will charge an accumulator in six hours, from which you can draw an hour or an hour and a half's work.

Mr. KING proposed the adjournment of the debate to the Dental Hospital, where the instrument could be seen.

Mr. SMITH TURNER proposed that they should hear Mr. Cunningham's paper before they left the room. This was seconded by Mr. King, and, after some discussion, agreed to.

(To be continued.)

Midland Branch.

MEETING AT LANCASTER.—THE IMPORTANCE OF REGISTRATION.

A MEETING of members and friends of the Midland Branch was held at Castle Hill House, Lancaster, on the evening of Saturday October 22nd. F. Bullin, Esq., J.P., of Chester, occupied the chair, and the following representatives of the dental profession were present:—Mr. Sidney Wormald, Stockport; Mr. A. M. Matthews, Bradford; Mr. Thomas Edward King, York; Mr. T. Wormald, Oldham; Mr. Thomas Murphy, Bolton; Mr. R. Edwards, Liverpool; Mr. J. Renshaw, Rochdale; Mr. George G. Campion, Manchester; Mr. W. H. Jewitt, Liverpool; Mr. J. A. Fothergill, Darlington; Mr. George Brunton, Leeds; Mr. John Cutts, Lancaster; Mr. D. A. Wormald, Bury; Mr. E. J. Ladmore, Bradford; Mr. J. Pike, Sheffield; and Mr. W. H. Waite, Liverpool.

The PRESIDENT, in his opening address, said it was not his purpose, to read any address such as that which he read when they had the

pleasure of meeting at Chester. For that address he had been attacked in a manner so hostile and unfair that, in duty to the Midland Branch and to himself, he had felt bound to make a further statement in justification of the action he then took. This statement would be shortly placed in their hands. He would simply remind them that they were members of an ancient and honourable family; but their forefathers were badly advised, and were unfortunate in an old partnership concern. In 1859 their family started afresh, with nothing but the family title, contents of the dental treasure-chest, and a fair and unsullied fame. At that date they had been sadly hampered by constant litigation and by other painful circumstances. In 1878, hordes of impostors illegally inscribed their names on the family register and settled down amongst them, much to their injury and annoyance. Their trustees in London had frequently been informed of these intrusions; but they, from want of tact, and even with the assistance of true members of the profession, had done little to suppress those illegalities. It had been left to the old and tried family solicitor, Dr. Waite, by personal efforts to point out the intruders, and no doubt there would soon be a considerable reduction in the number of squatters on the estate of their dental family. This led him to the pleasant duty of proposing, "That this meeting desires to record its satisfaction at the efforts which are being made to secure a complete revision of the Dentists' Register, and also to convey to our Honorary Secretary, Dr. W. H. Waite, its hearty appreciation of his untiring energy in directing general attention to the necessity for such a revision."

Mr. SIDNEY WORMALD had great pleasure in seconding that resolution, and he quite endorsed the remarks the President had made. A meeting such as that reminded one of past events. Sir John Tomes, in his retiring letter, said that "retrospect was the privilege of the aged," and he remembered, without going very far back—not more than ten or twelve years ago—they had practically no Register. And he remembered assisting at that time in making a register. They issued thousands of letters and circulars to the members of their profession, and they found that a great many of those letters and circulars were returned through the post. That was proof enough that the register of that time really required revision, or, rather, re-creation. Now they had a legal Register; but, again, they found that this also required revision. He was sure their gratitude and their thanks were due to Dr. Waite for the great trouble and labour he had taken in bringing all the circumstances and the importance of this question fully before them.

Mr. MATTHEWS heartily supported the resolution, which was carried unanimously.

Dr. WAITE, in acknowledgment, said he very highly appreciated their good opinion, but it was a much more satisfactory thing to him

to have the knowledge of "Something attempted, something done." The revision of the Dentists' Register, when it was completed, would be one of the most important things achieved since the passing of the Dental Act. There were two points he would like specially to impress upon their minds. The first was that, although the Registrar of the Medical Council was most anxious to have the Dentists' Register complete and correct, he could not accomplish that result without the help of the members of the dental profession. It was utterly impossible for any man in his position to know who really was in the profession without the help of those on the spot. Until the whole machinery of the Dentists' Act was fully understood and got into working order, the thing was to bear in mind that it was upon themselves—the members of the dental profession—to see that the Register was kept right. Whenever a death occurred, it was their duty to remind the local registrar of deaths of his duties under the Dentists' Act. He wanted to impress upon the members the importance of taking a personal interest in this matter. This cleansing of the Register was only the commencement of a more active general policy. He had been astonished within the past few weeks at the extent to which the Dentists' Act was trampled under foot. In almost every district where there was any population they found somebody practising anonymously, or under cover of a "Supply Association" or something of that kind. They must try to put an end to that sort of thing. They had waited long enough. The Act had been in force since 1878, and in their own interest as well as in the public interest, it was quite time that this legislation was thoroughly understood and enforced. Finally, he urged them to bear in mind that *they* would have to carry the work on. It was no use to depend upon others, or to expect the work to be done by officials; they must do it themselves.

The CHAIRMAN then called upon Dr. Waite to give his address on "The Constitution and Working of the British Dental Association."

MR. PRESIDENT AND GENTLEMEN,—I wish to speak this evening to Provincials, and my desire is to endeavour to arouse my brethren in the provinces to a sense of their power, their privilege, and their prerogative in connection with the British Dental Association. I am afraid that many of our friends have not carefully studied the constitution of the British Dental Association, and, consequently, they do not take the interest they ought to take in its proceedings. In an Association like ours, if there is centralization of direct effort, there should be also a wide diffusion of personal interest. "Vox populi, lex suprema" is a sound principle in concerns of this kind. The area of our influence needs to be largely extended, and the only possible method of increase is by the energy and activity of provincials. Moreover there are evils still rampant, unblushing violations of the law with which it is

impossible to deal so long as those who are most deeply affected, withhold their support, and slumber in discontented isolation. For these reasons I have presumed to invite your attention to the following remarks.

In our "Articles of Association" it is stated that the objects for which the Association is established are "the promotion of dental and the allied sciences, and the maintenance of the honour and interests of the dental profession." That is our business. You see, therefore, that the British Dental Association has been called into existence for the benefit of the *whole dental profession*; not for any section, not for its own members only, but to maintain the honour and interests of *all*. It follows that *all* are concerned in the progress and success of the British Dental Association, and also that the stronger it becomes, the more thoroughly and wisely it is worked the better for *all*. The only guarantee we can have for the fulfilment of this object is in the breadth and activity of our membership.

The conditions of membership are very simple, viz., the payment of a subscription and the signing of an agreement to abstain from unprofessional methods; in other words, to "do unto others as we would they should do unto us." No unregistered individual can be admitted. Surely the portal is wide enough. It excludes no upright man. How is it, then, that we have only some 650 members? I put that question to my provincial brethren. 5,000 registered practitioners, and only 650 who are anxious to maintain the honour and interests of their profession. Is that it, or is it that there are only 650 who are willing to obey the golden rule?

This paucity of numbers forces to the conclusion that our brethren in the provinces are as yet largely indifferent to their privilege and unaware of their power. This is the first point I wish to urge to-night, and I would urge it with all my might, let us make a vigorous effort to increase our membership. I make this appeal to provincials; it is from them alone that we can expect any considerable and useful increase. It is their element, their influence, their opinion, their strength that is wanted, and wanted badly. It appears to me that limitation is our greatest peril at the present time.

Now let me say a word or two in reference to the government of the British Dental Association. According to the Articles (No. 26) "The business of the Association shall be managed by the Representative Board, and the respective constitution, duties, powers, and modes of procedure of the Representative Board, shall be determined on from time to time by the Association in general meeting."

It appears, therefore, that the Representative Board is entirely under the control of the members. That fact should never be lost sight of.

Bye-law 15 says: "The Representative Board shall consist of the President and President-elect of the Association, and of at least forty members, including President and Vice-President of the Board, the Treasurer and Hon. Secretary, and the President and Secretary, for the time being, of each Branch of the Association."

Bye-law 16 says: "The Representative Board shall meet not less than four times in a year . . . the meetings to be held at such time and place as the Board shall appoint."

A certain number of the Board retire annually, and these vacancies are filled up at the Annual Meeting. Branches have the privilege of nominating members of the Board from their respective districts, but every nomination must be supported by the signatures of six Members of the British Dental Association.

I have gone thus into detail in order to make it evident that all power in the Association is resident in the members, and that the Representative Board has no authority whatever beyond the control and will of the members. As at present constituted, the Representative Board consists of about twenty members living in London, and about twenty-seven who hail from the provinces. Of the four meetings held annually, three have hitherto been held in London; these two facts, taken along with the sacrifice of time, and money imposed upon provincial members in travelling, &c., serve to shew that London members enjoy a decided advantage.

Our brethren in London are very zealous, very self-sacrificing, very jealous for the honour of serving the profession, but they need the leavening influence of provincial opinion and experience, and in my limited observation they have always shewn themselves amenable to the wishes of their provincial brethren. It is our business, however, to send members to the Board who will diligently and faithfully represent provincial opinion and see to it that provincial matters are properly attended to. It may be worth while to consider whether the Representative Board should always meet in London, or if it should hold some of its meetings in the country.

In any case, the work of the Board is necessarily of a general and somewhat superficial character, matters of detail have to be relegated to a Business Committee, created under Bye-law 23. This committee is composed entirely of members of the Board residing in London. As a matter of convenience, this arrangement appears inevitable at present, though for other reasons it is to be regretted. The entire absence of provincial influence on the Business Committee, is to my mind, one of the weakest points in the government of the British Dental Association.

How the difficulty is to be met I am at a loss to discover, but the evil may be largely reduced by a more earnest and self-sacrificing spirit on the part of provincial members generally, and those who accept seats on the Board in particular. The prin-

ciple of appointing a committee with powers undefined, is a vicious one at best. So far as I am aware, the powers of our Business Committee have never been defined. In such cases the temptation is very strong to assume responsibilities and perform functions which were never contemplated, and I should not like to say that the Business Committee of the British Dental Association has always successfully resisted that temptation. Be that as it may, the responsibility of government rests with the members generally, the power of control is in their hands, the channels are open through the eight branches; there is no restriction whatever upon a free and manly discussion of any subject, whether of local or of general importance.

Another portion of the work of the Representative Board is deputed to the Journal and Finance Committee. Here again we are confronted with limitation. For convenience sake, this committee is composed entirely of members residing in London. Moreover, at present it consists chiefly of gentlemen of one shade of politico-professional opinion. Now it is comparatively an easy thing for these gentlemen to conduct the Journal in accordance with their own conceptions of what should be, but it is very difficult for them, despite all their ability, their energy, their unrequited and unappreciated labour, to fully understand and adequately represent provincial ideas with which for the most part they are very imperfectly acquainted. I believe the Committee do their level best in regard to the general management, and especially in respect of reports of meetings, papers, &c., &c. Their task is not an easy one; the resources of space at their command are constricted. The funds at their disposal do not admit of that freedom and punctuality in producing reports which we should all like. There is no doubt the Journal Committee work very hard, gratuitously let us remember; and we are all under continual obligations to them. I would be the last to forget these things, but one cannot help being amused sometimes at the Editorial articles, as for example, when we are indulged with a "Retrospect" of dental politics, from a metropolitan point of view. At these times we discover the limitations we deplore. The matter becomes more serious however, when the editors presume to sit in judgment, on the opinions of their provincial brethren, and endeavour to ridicule, and condemn anyone who dares to question their infallibility. This is a stretching of prerogative—an abuse of privilege, which is entirely out of place in a journal professing to be the organ of an Association. We have no wish to coerce the views of our editorial brethren, but on the other hand, we cannot allow them to coerce our views. Fair play all round, and free circulation of thought, will do no harm to any. The time will come when it may be well to consider the advisability of enlarging the area of the Journal committee, and this is another reason for

awakening on the part of provincials. This matter like the foregoing, is in the hands of the members, and it is for them, to exercise their privilege.

In conclusion, let me say a word about the branches. We have eight, covering pretty well the whole of the United Kingdom. But we have only just begun our work. Hitherto we have enlisted those who by education, by natural predilection, and taste, are in full sympathy with our organisation. These are the minority in the profession. We have before us the task of conversion. Enlightenment entails responsibility, and the sphere of our responsibility is close at hand. We are anxious to make our branch meetings profitable to ourselves and that is right. Let us not forget to make them suggestive and attractive to others. We may err on the side of selfish accretion, we cannot go wrong on the side of generous outgiving. Suppose we were to hold one or two meetings of each branch every winter, to which every reputable practitioner in the district shall be invited? suppose we strove to make those meetings as fertile and profitable as possible, both in scientific and practical instruction? Can there be any doubt that we should obtain a large accession of members?

Suppose again, that it was a *sine quâ non* that presidents, and secretaries of branches, should attend the meetings of the Representative Board regularly, and report to their several councils, from time to time, the proceedings of the Board? Does it not stand to reason, there would soon be a much increased interest in these proceedings throughout the country?

Suppose moreover, that the secretary of each branch was *ex officio* a member of the Business Committee, so that whenever anything arose affecting his district, he would have the right to attend? Does it not go without saying, that the Business Committee would be in a far better position to deal with any such cases? Suppose once more, (though I am aware, it is akin to sacrilege to indulge such a daring supposition) that the presidents of branches, were invited once in a while, to write a leading article for the Journal? Does any one in his senses doubt that the result would prove advantageous, in the variety and freshness of the articles? These are random suggestions, but they tend in the direction of development of the fundamental principle upon which our Association has been established.

Generous recognition of each other's privilege, mutual consideration for each other's conviction, equality in the distribution of power, sterling honesty in the exercise of prerogative, these are principles of action which ennoble men, and exalt all labour. In an Association such as the British Dental Association, selfishness, supremacy, secretiveness, whether of the individual, or of the party, are fatal to all progress. These things lead backward, while the former things lead upward and onward. We have a

good constitution, let us act up to its privilege, and improve its golden opportunity. Thus alone can we creditably discharge our obligations, and thus only can we truly elevate our profession.

The PRESIDENT said in the main he endorsed what had been said by Dr. Waite, and was particularly amused at his reference to the Journal. He had a very strong conviction that the real work of the British Dental Association was only just beginning, and there seemed to be a general upheaval throughout the profession. He thought dental legislation was only just at its commencement. An M.R.C.S. friend residing in London wrote to him the other day and said: "We are all of the great medical profession, dentists just as much as ophthalmic surgeons," and so on. His medical friend thought that the Medical Council had done very well for the dentists. Dentists, on the contrary, thought that the Medical Council had treated them about as badly as it could have treated them. Probably that arose greatly from ignorance. His (the President's) impression was that before long they could dispense with the leading-strings of the Medical Council. As their Association increased in numbers and in importance it would be found that they were quite capable of taking care of their own affairs. Possibly he might not live to see that consummation, but he held this hope on account of his younger friends, and it was on their behalf that he urged they ought to fight as earnestly as they could for a Dental Council in lieu of the Medical Council. Take the eight branches of the British Dental Association, with some seven or eight hundred members, would any one make him believe that there was not sufficient wisdom among those seven or eight hundred men to enable them to manage their own affairs? They were, of course, compared with the medical profession, few in numbers; but he really thought they had sufficient common-sense amongst them to manage their own affairs in a much better way than a number of men whom it took over twenty years to find out what a dentist really was. It was only lately that those men had found out that a dentist was a respectable individual. It was said by Sir William Gull—whose illness they deplored—that when he looked around him he wondered at the ignorance of his fellows, whose common notion was that the functions of a dentist was to take out teeth, while his (Sir William's) notion was that it was the real business of a dentist to keep teeth in. To say that dentists were not capable of managing the business and upholding the honour of their profession was most ridiculous. He gloried in the numbers that had been added to his profession and in its scientific advancement. They had much progress in those two directions, and they now wanted to raise their social status. They wanted their profession to be directly represented on boards and hospitals, and not treated as if they were aliens or bastards. The stronger they made the British Dental Association, the sooner they could apply for a new Dental Act, which would relieve their friends from the arduous duties imposed upon them since

1878, and then perhaps they could convince the Medical Council that they could manage their business better than that Council did. He had lost confidence in that centralised system which made their London friends think that they were the brain-power of the world. If a man "down in the country" showed that he was at all in advance of his age, he was either deemed quixotic or a fanatic, or "a decent fellow gone wrong," or something of that kind.

The President apologised for being obliged to leave the meeting to catch a homeward train, but a cordial vote of thanks was accorded to him.

Mr. MATTHEWS was then voted to the chair, and called for a discussion upon the various subjects introduced.

Mr. FOTHERGILL (Darlington) asked if there was any disability preventing provincial members serving on the editorial staff.

Dr. WAITE said the provincial members were as eligible as anybody else.

Mr. FOTHERGILL said if the provincial members had the majority on the Board they could simply do what they liked. If they neglected to attend it was their own fault.

Dr. WAITE : I grant it. But the whole tenor of my remarks was to rouse the provincials to a sense of their privilege.

Mr. FOTHERGILL said he was not opposing Dr. Waite's ideas at all. He had enjoyed his address immensely, and it was worth while coming all the way from Darlington to hear it.

Mr. BRUNTON said the paucity of attendance on the part of provincial representatives struck him as quite marked. It was for the branches to look after their representatives, and request them to give account of their stewardship. There was, of course, a difficulty to get men who could attend.

Mr. FOTHERGILL said when the management was centralised in London so much they only had the views held by the London members.

Dr. WAITE said it was quite true that the management was centralised in London, but it was so centralised by default of the provincial representatives. If the provincials were active and attended the meetings they could have as much of the management as the London people had. There was nothing to hinder it.

Mr. RENSHAW said, one thing which to his mind needed looking into was the manner in which the Representative Board elected their officers. He did not agree with the whole of the offices being held by London men. He thought that some of those offices ought to be filled by their professional brethren in the provinces, among whom were numbers of good men and true. The wisdom of the whole profession was not centred in London.

There was another point mentioned by Dr. Waite, and that was the practice of throwing stones from behind a wall. That had been

done in their Journal. He did not like the attacks which had been made, both in the leading articles and in the letters which had been written in reference to Mr. Bullin's Chester Address. He thought it was very undesirable that any one should give a side attack, or that anyone should not have the courage to state openly his opinion.

Mr. MURPHY : The number of our professional brethren in the provinces is greater than in London, and therefore we ought to have a greater share in the composition and work of the committees.

Mr. MATTHEWS : The question at present was, what were they to do, and how were they to do it, and who should do it? The great importance of a correct Register had been strongly impressed upon them ; how could it be secured? It seemed to him that it was nobody's duty in particular, and yet it is everybody's duty.

Mr. RENSHAW : Let every man of the British Dental Association be a centre in his own district and communicate with the General Registrar.

Mr. MATTHEWS : Concurred in that suggestion. If they made one particular party responsible in every town they would have something like a *modus operandi*.

Mr. FOTHERGILL said the unfortunate thing was they had not members of the British Dental Association in every town.

The CHAIRMAN said the worst of it was that they came to these meetings and went away from them, and *hoped* merely that some good would come of them. The likeliest men to look after the Register were the young members of the profession.

Dr. WAITE said he would put Mr. Matthews' ideas to a practical test, and he at once called for the names of volunteers who would assist, each in his own town or district, to keep up the Register. The call met with such a response as justified Dr. Waite in the remark, "This looks like business," and the following list of names was handed in :—

Ashton-on-Mersey—J. H. Jones ; Bangor—E. Clarke ; Birkenhead—W. Shillinglaw ; Blackburn—J. Hilder ; Bolton—T. Murphy ; Bradford—E. Ladmore ; Bury—D. Wormald ; Buxton—J. E. Sutton ; Burnley—T. Jackson ; Carlisle—J. Kekwick ; Chester—M. Johnson ; Clitheroe—J. H. Balcock ; Darlington, Stockton, Middlesborough—J. A. Fothergill ; Derby—F. Richardson ; Dewsbury—W. Margetson ; Doncaster—F. Walker ; Hanley—J. S. Crapper ; Huddersfield—J. W. Senior ; Hull—J. C. Storey ; Harrogate, York, Scarborough—T. E. King ; Halifax—A. B. Wolfenden ; Kendal—W. S. Grayson ; Leeds—G. Brunton ; Lancaster—J. Cutts ; Liverpool—W. H. Waite, W. H. Jewitt ; Longton—A. E. Emery ; Manchester—G. Champion ; Mansfield—E. Renshaw ; Nottingham—H. Blandy ; Newcastle—E. Fothergill ; Northwich—W. Lee ; Oldham—T. Wormald ; Rhyl—E. W. Keatinge ; Rochdale, Bacup, Todmorden—I. Renshaw ; Sheffield—J. L. Pike ; Southport—J. Dickin ; Stockport—S. Wormald ; Wakefield—J. N. Manton ; Warrington—J. Taylor.

Mr. LADMORE (Bradford) : Said he quite approved of individual members of the Association attending to the Register, and he should be very pleased to take his part in the work.

Dr. WAITE said the idea of a geographical register had been brought before the Representative Board, and copies were being prepared for the use of secretaries. Lists of names could then be supplied to those who had offered to assist.

Mr. MURPHY pointed out that one great difficulty would be to get the register of towns where there were no members of the British Dental Association.

The CHAIRMAN suggested that a circular letter should be sent to members in every town in the Kingdom.

Mr. CUTTS and others approved of the suggestion.

Mr. GEO. CAMPION (Manchester) : Thought that the branches of the British Dental Association might well take up the subject of explaining the objects of the Association in those towns where there were no members for the purpose of obtaining new members. This could hardly be done by individuals. It would require a certain amount of money, and it seemed to him to be one of those things to which a portion of the balance in the Treasurer's hands, if he had any balance, might be devoted.

Mr. S. WORMALD : The Treasurer will be most happy. He thanked Mr. Campion for his suggestion that some means should be taken—some portion of their surplus employed—to preach the advantages of the British Dental Association to the outside members of their profession. He was very glad that point had been brought out. If this point could be attended to, and if the outsiders could be approached and brought in, he was sure the treasurer of every branch would gladly offer up all the funds he had and give of his own besides to do that.

Mr. RENSHAW said he should like to urge the importance of having these local meetings reported in the Journal as fully as possible. To his mind all such reports were extremely interesting, and they would have the effect of stimulating brethren in other parts of the country. He should like further to draw attention to a little thing which had struck him in reading the Journal's retrospect of the condition of dentistry during the past few years. He found that in this retrospect there was a jump from the year 1858 to the year 1860. Then there was no record of anything until 1867, and at that point there was a flourish of trumpets with reference to the Dental Reform Association. It was said that "a few years later a desire for something more than the existing organisation was felt amongst us." But there was no date and no place mentioned, and one would have thought that this idea of reform had emanated entirely from their London friends. But that was not so. After reading that he took the trouble to read up the Journal as to the Dental Reform question, and

he found a number giving an account of that meeting held in Manchester on the 31st August, 1875. In the "retrospect" there was no mention of the meeting held in Manchester on that date. He thought it was due to one who was present with them that night—one whom they all esteemed and honoured, and one for whom some of them had a great amount of affection, too—friend Sidney Wormald—it was due, he said, to their friend to put the Journal right in that particular. He had taken a note of the introductory remarks of the chairman who presided at that meeting in Manchester, and those remarks he would read:—"GENTLEMEN,—It is with an overwhelming sense of responsibility that I take this chair, for the assembly over which I am now called to preside is the first that has ever met, if not in the world, certainly in Europe, for the general purpose of seeking for the adoption of some measures to raise the social status of our profession. It is the first meeting in which men of all grades, men of all parties, men of every diversity of opinion, have united either in person or in sentiment, or in pocket, for the common object, and according as we act to-day, good or evil may result to the profession at large. I do not for one moment forget that there have been grand meetings in London, in present and in former years, but they have all been held for some specific purpose, or for the promotion of some special scheme from which a large and influential section of the profession had held aloof, either on the one side or on the other."

Then he took it that the great advances which they had made in dentistry in this country were largely due to that meeting in Manchester. Although Sidney Wormald's name was excluded from that retrospect, although that Manchester meeting was not mentioned at all, still, in the editorial of the *Monthly Review of Dental Surgery* of September, 1875, it was said:—"No one can quarrel with the result of the Manchester meeting. Although many of us would have preferred to have seen such a gathering in London rather than in the provinces, still it must always remain a source of unqualified satisfaction to the whole of the profession that the first practical step towards prohibitive legislation was taken in a district where the necessity for such a measure is most clearly to be seen."

Mr. FOTHERGILL proposed that hearty thanks be given to Mr. John Cutts, of Lancaster, the gentleman to whom they were indebted for the arrangement of their entertainment.

Dr. WAITE seconded, and the motion was heartily carried.

The CHAIRMAN suggested that, in accordance with the suggestions thrown out, they should hold their meetings in those towns which were most behindhand in the matter of membership in the Association.

Mr. LADMORE thought that a very good suggestion, because wherever their meetings had been held there had always been an accession of members. He would ask (reverting to the subject of registration)

if the "local investigators," as they might be called, were to be supplied with a list of the men in their towns from the geographical register.

Dr. WAITE said that was so.

A vote of thanks was passed to Mr. Matthews for his supplementary services in the chair, and the meeting came to a close.

The Irish Branch.

A MEETING of dental practitioners was held at the Royal Hotel, Belfast, on Friday evening, November 4th, at eight o'clock, to meet Mr. W. Booth Pearsall, F.R.C.S.I., of Dublin, hon. sec. of the Irish Branch of the British Dental Association. Dr. Richard Burnett, Messrs. J. C. Clarke, J. Smyth, Wm. Bowden, J. McStorey, J. Jellett, J. J. Andrew, L.D.S., J. D. Bowden, jun., L.D.S., J. Elwood, L.D.S., Members of the British Dental Association, attended. The Chair was taken by Dr. BURNETT, who, after expressing his great pleasure in attending the first meeting of dental practitioners ever held in Ulster, called upon Mr. W. Booth Pearsall, of Dublin, to explain the objects of the meeting.

Mr. PEARSALL spoke at length of the aims and objects of the British Dental Association, dwelling upon the enormous advantages of association in an honourable and useful cause, and describing the work the British Dental Association had done in consolidating the dental profession, so long scattered without a leader or an object. The annual meeting of the Association would, he said, take place in Dublin in August next, and he begged all present to heartily take their part in the proceedings on that occasion, so that the trust reposed by the Association in the earnestness and vigour of the Irish Branch might be justified.

Mr. J. C. CLARKE, L.D.S., and Mr. J. J. ANDREW, L.D.S., proposed and seconded the following resolution:—"That we most cordially pledge ourselves to use our best efforts to make the annual meeting of the British Dental Association a success."

Mr. ELWOOD, in supporting the resolution, said it was the duty of those present to accept the responsibility imposed upon them, and to cordially join in any means that would unite them in professional amity.

Mr. SMYTH was glad to hear that the long-wished-for organisation had taken place. He had been an original member of the Association, but had lapsed from it when he found he was the

only member in Ireland, but he would heartily join in its work again.

Mr. BOWDEN was delighted to have the pleasure of meeting his brother practitioners on this happy occasion, and he was certain, from the earnestness and vigour with which Mr. Pearsall had taken up his duties in gathering together the worthy members of the profession in Ireland, great good would result. He warmly thanked Mr. Pearsall personally for his generosity in coming to Belfast to explain the uses and objects of the British Dental Association.

A vote of thanks to Dr. Burnett heartily given closed the meeting.

Southern Counties Branch.

THE autumnal meeting will be held at the Town Hall, Brighton, on Saturday, November 19th, at 7 p.m., and the business of the meeting will consist of casual communications and exhibits.

The Council will meet at 5 ; dinner at 6 o'clock at Mentasti's Restaurant, 62, East Street, near the Town Hall. Price of table d'hôte, three shillings.

Early notice of communications to the hon. sec. will much oblige.

J. DENNANT, *Hon. Sec.*

1, *Sillwood Road, Brighton.*

West of Scotland Branch.

THE annual meeting of the West of Scotland Branch will be held on Thursday, November 24th, at the Hall of the Faculty of Physicians and Surgeons, Glasgow, at 8 p.m., when the usual reports will be read, and office bearers elected for the ensuing year.

WE read in a contemporary journal that the dental students of Glasgow have drawn up a petition appealing to the West of Scotland Branch of the British Dental Association for protection against men in Glasgow who, without right or title, are practising dentistry, to the detriment of those in the profession, who are spending time and money in order to make themselves proficient, and to give them a legal right to call themselves "dentists."

REPORTS OF SOCIETIES AND OTHER MEETINGS.

The Odontological Society of Great Britain.

THE Society's rooms in Leicester Square not being available owing to the extensive alterations now in progress, the first meeting of the session was held on the 7th inst., at the Beethoven Rooms, Harley Street, Mr. C. S. TOMES, F.R.S., President, in the chair. There was a full attendance.

The Curator (Mr. STORER BENNETT) announced donations to the museum from Messrs. Farebrother, of Salisbury, and Welch, of Brighton. Also that thirteen specimens had been purchased from the Zoological Society of London, including a series of skulls illustrating the progress of dentition in the monkey, the skull of the great ant-eater and others, which filled up gaps in the Society's Comparative Anatomy collection. He hoped to describe these specimens more fully on a future occasion.

Mr. HENRI WEISS showed models of the mouth of a young lady, aged 22, with the following remarkable dentition. In the upper jaw there were two permanent centrals, one lateral and two (?) twelve-year molars, together with two temporary canines and a temporary lateral. In the lower jaw there were the permanent canines and second molars, together with two centrals, a lateral, a canine, and a molar of the temporary set. Thus of the thirty-two permanent teeth twenty-two were absent; none had been extracted.

The other casual communications having been postponed, the adjourned discussion on cocaine was opened by Mr. BROWNE-MASON, of Exeter, who said he had used it in between eighty and a hundred cases, and had not yet met with any unpleasant results. He handed in tabulated notes of the last twenty cases, thirteen of which were very successful, six less so, the patient feeling slight pain, and one failure, but in that case only half a grain was injected. He usually injected a grain. One lady was faint for about ten minutes, but he had seen her quite as bad on other occasions when no cocaine had been used. A few of the patients had complained of slight subjective symptoms, such as dryness of the mouth, and others had exhibited a tendency to loquacity, but in none of the cases had he had the smallest cause for anxiety.

Mr. STOCKEN said he had met with more or less unpleasant symptoms in about one fourth of his cases, and in two of them

the toxic effects were very serious. One of the patients was a medical man for whom on a previous occasion he had injected a grain of the hydrochlorate with perfectly satisfactory results. On the second occasion the same quantity was injected, ten minims of a ten per cent. solution, and a bicuspid was extracted without pain. But immediately afterwards, the patient complained of nausea and faintness, his face became pale, his expression anxious, pulse extremely feeble, and he perspired profusely. He continued in this state for a considerable time, and then gradually recovered. The other case was that of a gentleman, aged 45, of somewhat nervous temperament. The same dose, one grain, was injected and a lower molar removed. The patient then became deadly pale and complained of faintness and giddiness; his pulse was feeble, extremities cold and numb, respiration gasping and irregular, voice thick, and deglutition very difficult, but there was no loss of consciousness. He continued in this alarming condition for nearly two hours, and the effects did not entirely pass off for another two hours. He, Mr. Stocken, could only account for the widely different results obtained by different operators by supposing that the bad effects must be due to some impurity in the drug, and that nearly every sample of cocaine contained a certain amount of impurity had been clearly pointed out by Dr. Squibb.

Mr. HENRI WEISS said he had used cocaine in between thirty and forty cases, and had only two cases of slight toxic effects which soon passed off. He used Howard's preparation in grain doses.

Mr. BOYD WALLIS said he had used it extensively, and had never met with anything worse than slight faintness. He used the pure alkaloid dissolved in ether.

Mr. STORY, of Hull, gave a similar report of his experience.

Mr. COTTERELL said that since July he had used cocaine in sixty-eight cases without any bad effects. He used from a grain to a grain and a half. He believed that the symptoms described by Mr. Stocken and others were simply due to nervousness and fright.

Dr. MAURICE DAVIS, one of the patients referred to by Mr. Stocken, replied that in his case, at all events, the symptoms were not due to nervousness, for the results of the injection on the first occasion having been quite satisfactory, he had no reason to expect anything different on the second.

Mr. WALTER COFFIN said it did not appear to be generally known that cocaine, when heated with water, became changed into an isomeric substance, which possessed no anæsthetic properties whatever. It could be dissolved in warm water without any danger of this change occurring, but when boiled in a test-tube, as he had seen some operators do, a portion at least of the alkaloid would be thus changed. He thought that some of the failures met with might be thus explained.

Dr. CUNNINGHAM said that since the reading of his paper he had continued the use of cocaine, but with smaller doses. He still met with slight toxic effects pretty frequently, but nothing serious. It had lately been stated that atropine antagonized the poisonous effects of cocaine, and he suggested that those who used this drug, should keep tablets of atropine handy for use as a remedy, in addition to the nitrite of amyl and other things now used in these cases.

Mr. HERN said his further experience since May had only served to strengthen the conclusions at which he then arrived. He had, however, ascertained that dryness of the mouth was not the result of general cocaine poisoning, for when the drug was injected into the arm this symptom was absent, whilst the solution of a one-twelfth of a grain tablet in the mouth produced it at once. It was evident, therefore, that it was due to the local effect on the tongue of a small portion of the solution which escaped from the punctures, or by some other means found its way into the mouth during the process of injection.

The PRESIDENT, in closing the discussion, stated that a considerable number of the forms issued to members in the summer had been returned duly filled up. These would be carefully examined, and the results tabulated and published in the society's Transactions.

Mr. J. BLAND SUTTON then read a paper on "Odontomes," illustrated by a number of interesting specimens.

An odontome, he said, may be defined as a neoplasm, composed of dental tissues (enamel, dentine and cementum) in varying proportions, and in different degrees of development, arising from tooth-germs or teeth still in process of growth. It was customary to restrict the term, at least from the clinical point of view, to hard tumours, found in the jaws, and composed of fully developed enamel, dentine and cementum, or varieties of these tissues. It was, however, the opinion of those who had

investigated the subject of late years that the term should apply not only to solid dental tumours, but to certain other curious aberrations of tooth development.

He proposed, therefore, to classify odontomes in four groups, including amongst them certain cystic formations and fibrous tumours of the jaws which had not hitherto been generally considered to belong to this class, and taking into consideration their mode of genesis as well as their structure.

Group A.—Aberrations of the enamel organ, including (1) epithelial odontomes, (2) calcified epithelial odontomes.

B.—Aberrations of the follicle, including (1) follicular cysts, (2) fibrous odontomes, and (3) cementomata.

C.—Aberrations of the papilla, (1) radicular odontomes—(a) dentomata, (b) osteo-dentomata, (c) cementomata.

D.—Aberrations of the whole tooth germ—composite odontomes.

To which must be added a fifth class (E) for anomalous odontomes.

Under the name of epithelial odontomes (class A), Mr. Sutton referred to the tumours formerly known as cystic sarcomata of the jaw, and fully described by Mr. Eve in a paper read before the Society in 1885. It was generally believed that these tumours had their origin in an aberration of the enamel organ of teeth which normally should go on to full development, or that in some cases they might arise from epithelial ingrowths around the dental alveoli which might possibly be regarded as representing teeth long since suppressed in the process of human evolution. Usually, however, the presence of one of these tumours, as was the case with odontomes generally, was coincident with the absence of one or more molar teeth.

These tumours were composed of a congeries of cysts separated by fibrous septa: but the septa instead of being fibrous might be composed of bone, thus forming a calcified epithelial odontome. A specimen of this kind had been described and figured by Wedl in his "Atlas zur Pathologie der Zähne," and Mr. Tomes had mentioned another in the course of the discussion on Mr. Eve's paper.

(B.) *Aberrations of the Follicle*: Mr. Sutton's first sub-division under this head, follicular odontomes, answers to what are generally known as dentigerous cysts. As the result of an extended study of these cysts he thought he should be able to show that certain forms of hard odontome arose from aberration of the

dental follicle, and that the two varieties could be connected by a series of transitional forms. After briefly describing the typical follicular odontome (dentigerous cyst), as met with in man and animals, and the changes (calcification and suppuration) which might occur in them, he proceeded to trace the steps by which, through the next subdivision (fibrous odontomes), these could be connected with growths which were generally recognised as odontomes. He pointed out also that Broca, under the term odontomes embryoplastiques, included certain forms of fibrous tumours of the jaw.

Fibrous Odontomes appeared to be somewhat common in ruminant animals. In a previous paper he had described examples which he had met with in goats, and he had lately met with another in an opossum. Virchow described one in a calf. But they also occurred in the human subject, though in most of the recorded cases their true nature had been overlooked. They had their origin in an abnormal growth of the sac in which the developing tooth is enclosed previous to its eruption from the gum, and which is strongly developed in ruminants. They consist of a dense laminated fibrous tissue enclosing softer contents and a more or less perfect molar tooth. The fibrous wall is generally found to contain bony plates and spiculæ, the proportion of osseous tissue varying in amount in different specimens, and affording in its arrangement and microscopical structure strong evidence that these growths may be regarded as cementomata at an early stage of development.

The next subdivision, cementomata, consisted of growths which, unlike those hitherto described, were generally spoken of as odontomes, though, unless the term be arbitrarily confined to hard tumours connected with the teeth, the distinction could not be justified. They were composed, as the name implied, of cementum, and though met with in man, were most common in horses and the ungulata generally, occurring in connection with molar teeth. They were sometimes of very considerable size, one being described by Forget which weighed $2\frac{1}{2}$ lbs.; it was met with in the right upper jaw of a horse. Mr. Sutton described at some length the microscopical characters of typical specimens of these tumours, the result being to confirm his view that they originated from overgrown tooth-follicles. Some of the large odontomes of this class were evidently made up of two or more tooth germs, coalescence having taken place whilst the tissues were still soft, previous to ossification.

(C.) *Aberrations of the Papilla*: A radicular odontome was one which had its origin after the crown of the tooth was completed and whilst the roots were still in process of formation. They consisted mainly of dentine and osteo-dentine in varying proportions. If the former preponderated, the term radicular dentoma was applied to the growth; if the latter, radicular osteo-dentoma; whilst if it was composed chiefly of cementum, it was a radicular cementoma. Mr. Sutton referred to typical examples of each of these, described by Salter, Tomes, Broca and other authorities, which had been met with in the human subject, and to some very interesting specimens which he himself had met with in animals, *i.e.*, in the marmot, porcupine and agouti, and by others in the horse and elephant.

(D.) *Aberration of the whole Tooth-germ*: The term composite odontomes was a convenient one to apply to those hard tooth tumours which bore little or no resemblance in shape to teeth, but which occurred in the jaws, and consisted of a disordered conglomeration of enamel, dentine and cementum, and must be considered to have arisen from an abnormal growth of all the elements of a tooth-germ,—enamel-organ, papilla, and follicle. As yet he had not met with any odontomes of this class in the lower animals, but typical cases occurring in man were recorded by Heath, Tomes, Forget, and others, and to these he proceeded to refer.

(E.) Under the head of anomalous odontomes Mr. Sutton referred to some remarkable cases, of which that brought forward by Mr. Sims at a meeting of the Central Counties Branch in October, 1885,* and described also at the Odontological Society in December of the same year, may be taken as a type. It was spoken of by Mr. Sims as a case of dentigerous cyst, but this was obviously an incorrect description. Similar cases were recorded by Tomes and Heath as having been met with in the human subject, and an American veterinary surgeon had removed from the superior maxillary sinus of a horse a cyst containing more than four hundred teeth, the largest of which was as big as a thumb, and measured an inch and a half in length. Mr. Sutton came to the conclusion that these tumours must be looked upon as odontomes, but appeared to be quite at a loss to give an explanation of their origin, and therefore placed them in a class by themselves.

* JOURNAL OF THE BRITISH DENTAL ASSOCIATION, VOL. VI., p. 568.

The PRESIDENT said he was not surprised at the absence of discussion, for few would have the temerity at a few minutes' notice to challenge conclusions arrived at by Mr. Sutton, after careful consideration. He was glad to find Mr. Sutton classing dentigerous cysts with odontomes, though with regard to the proposed change of name, he thought the term now in use would die hard. He believed, however, that Mr. Sutton's suggested classification would, in course of time, be generally adopted.

He then announced that the next meeting of the Society would be held at the Beethoven Rooms, 27, Harley Street, W., on Monday, December 5th, at 8 p.m. Business: Casual communications by Mr. Bland Sutton "On some Cases of Abnormal Fissures about the Mouth;" Mr. Storer Bennett "On an Extraordinary Example of Tooth Development;" and Mr. Penfold on an anæsthetic—"Fluosilicate of Sodium." Paper by Mr. E. Lloyd Williams on "Pathology of Alveolar Abscess."

National Dental Hospital Students' Society.

THE ordinary meeting of this society was held on October 14th, Mr. HENRI WEISS, President, in the chair. After the usual formal business, Messrs. Ritson, Field, and Furo, were admitted members of the society. Mr. Fripp then exhibited the model of the upper jaw of a woman, in which there was transposition of the canine and first bicuspid; also that of a singularly well-developed set of teeth, showing the cingulum on the incisors to a marked degree. After other communications of minor interest had been made, Mr. Rushton proceeded to read his paper on "The Special Pathology of the Wisdom Tooth," in which the development, eruption, treatment, and those points suggested by the theory of evolution were exhaustively dealt with. Among the numerous specimens brought forward to illustrate the text was an upper tooth which had its root considerably worn down by attrition, its pulp cavity closed by secondary dentine, whilst the crown remained beneath the gum, its existence only being disclosed on extraction. After a full discussion the meeting was adjourned until November 4th, when a paper will be read by Mr. Lovenster, M.R.C.S., L.R.C.P.

MINOR NOTICES AND CRITICAL ABSTRACTS.

Inaugural Lecture on Dental Surgery and Therapeutics at the National Dental Hospital.

MR. GEORGE CUNNINGHAM'S Introductory Lecture on "Dental Surgery and Therapeutics," was delivered at the National Dental Hospital, on the 31st ult.

After a few introductory remarks, the lecturer briefly traced the history of the lectureship, inaugurated in 1879 by Dr. Finley Thomson, and carried on by him till 1882, when the post rendered vacant by his retirement was filled by the appointment of Dr. St. George Elliott, for whose promises of future assistance the speaker expressed himself grateful. He then dwelt at some length on the advantages to the student of attending the course of lectures, despite the fact that it was not one required by the College of Surgeons. Coming to the plan of the lectures, Mr. Cunningham quoted Dr. Marshall Webb's definition of operative dentistry, and then presented a syllabus of his course, of which the following is a brief outline.

A consideration of the advantages of a systematic examination of the mouth will lead to a discussion of the character of the oral secretions and their relation to salivary calculus, as well as to the extent of the caries present. The important question of symmetrical extraction will be considered, and an effort made to indicate the cases in which extraction may be more truly conservative than filling. The requisites for an ideal filling, and the qualities and modes of preparing those actually employed will follow. The rubber dam, wedges, separators, and other appliances, together with the use of the matrix, will be considered. The different methods of filling will be described and a series of practical demonstrations will be arranged. Plastic fillings and the chemistry of the cements, mainly the phosphates, will engage attention. The treatment of dental caries will include simple and contour filling, porcelain tips, and the finishing of fillings. On the exposure and treatment of the pulp, some new and reliable statistics will be given. A consideration of porcelain caps and gold crowns will lead up to bridgework. Replantation, transplantation, and implantation, will conclude the series.

Mr. Cunningham devoted the remainder of his lecture to an account of such recent advances in dental surgery, as he had had

the opportunity of becoming acquainted with at the International Medical Congress. The subject chiefly discussed was that of implantation, and the lecturer made some special reference to the recent experiments of Dr. Younger in implanting and transplanting teeth.

The Action of Iodoform.

IN a paper read before the Sixteenth Congress of German Physicians and Surgeons, De Ruyter discussed the question of the antiseptic qualities of iodoform, and recorded the results of certain experiments which he had made in connection therewith. He agrees with Heyn and Roosing, of Copenhagen, in the statement that iodoform does not act anti-parasitically outside the animal body, where it remains undecomposed. But he has been able to show that iodoform will protect artificial nutrition surfaces and wounds against micro-organisms which happen to fall on them. Like Dr. Behring, De Ruyter found that iodoform was decomposed by pus which was kept at blood-heat outside the body. Sterilised blood, or blood serum, did not chemically alter iodoform, but in the presence of pus cocci the iodoform began to break up. The compound of iodine which resulted combined with the ptomaines, and the latter were thus deprived of their harmful properties, leaving the cocci still alive, though much reduced in activity. The author adds that a solution of iodoform in alcohol is especially useful for rapid disinfection, namely, for killing micro-organisms in wounds, or for the sterilisation of dressing materials. The doubt which has lately been thrown upon the antiseptic qualities of iodoform has probably been a source of much surprise to many surgeons who have largely employed the agent for this purpose. But, apart from its use as an antiseptic, there is no concealing the fact that iodoform finds less favour with surgeons generally than was the case a short time ago. Indeed, there is more than a breath of suspicion in regard to the drug having been found to produce toxic symptoms, and we were promised last session a paper at one of the societies by a London surgeon which would deal with this point. It is somewhat curious how the use of this drug has been modified by time; when it was first introduced, too much, it was considered, of the agent could not be placed in a wound, say that of an amputation; nowadays, however, a very little is found to suffice.—*The Medical Press*, Oct. 26th, 1887.

NEW INVENTIONS.

Jamieson's Eclipse Amalgam.

AFTER a very careful trial we can pronounce this amalgam very good indeed ; it is exceptionally hard, and does not change colour at all, if carefully washed. The surface will take a good polish, and it is quite easy to work. It is very much harder, and probably more durable than Sullivan, without the drawback of turning the tooth black, or looking black itself. Moreover, it does not appear to shrink.

ANNOTATIONS.

WE are pleased to learn from the annual report of the athletic club of the Dental Hospital that the first season has been on the whole successful. The initial difficulties which attend the formation of such associations appear to have been satisfactorily overcome, and already the club can point to "something attempted, something done." It comprises three sections, for cricket, tennis, and football respectively. The first-named has perhaps done best ; at any rate it has been very fortunate in its matches, having won six out of eleven. The football team was somewhat weaker than it would have been had the club been formed earlier in the season, the service of several of the best men having been enlisted on behalf of their general hospitals before matters took shape at the Dental Hospital. Its future prospects are, however, said to be extremely good. We trust that the club may next season have a very good record, and that the further object which the promoters have in view—that of eventually forming a social club for past and present students—may be attained. Sir Edwin Saunders has been elected president of the whole club, and the sectional presidents are Messrs. Walker, Hutchinson, and the Dean. The secretary, to whom much of the present success is due, is Mr. J. F. Colyer.

MR. BROWNLIE wishes to express regret for his omission to read at the Glasgow meeting not only the letter from the Vice-president of the Representative Board to which reference was made in our last number, but also some other communications from gentlemen who were for private reasons—mostly illness—unable to be pre-

sent. This slight oversight will, we feel sure, occasion neither disappointment nor surprise to those who know anything of the multitude of small details which engage the attention of a President on the occasion of an annual gathering such as that at Glasgow.

A VERY curious case of irregular eruption is recorded in a recent number of the *British Medical Journal*. At a meeting of the Cambridge Medical Society in July, Mr. Carver exhibited a photograph of a child, aged $6\frac{1}{2}$ years, showing a tooth growing from the right lower eyelid. The patient when born had a small excrescence on the lower lid of the right eye. This increased in size until he was about $4\frac{1}{2}$ years old, when there appeared on the outer side a small white spot, which was found to be hard, and gradually the crown of a tooth (canine) appeared and continued to erupt until it completely obtruded. In this condition it remained until removed. The fang of the tooth was somewhat bulbous. The number of deciduous teeth was perfect, and the boy had cut the upper and lower middle incisor teeth.

SUDDEN DEATH OF A PHYSICIAN.—Many of our readers will have already noticed under this heading, an account in the *Daily Telegraph* of the sudden death of a gentleman which was rather obviously connected with imperfect masticatory apparatus. "Mr. William Jelly, Fellow of the Royal College of Physicians, and lately residing at 105, St. Clare Road, West Kensington, went out on Wednesday night to attend a meeting at Exeter Hall. When passing under the portico of the Haymarket Theatre he was seen to stagger and fall down dead. At the inquest, which was held by Mr. Troutbeck, at the St. Martin's Vestry Hall, a doctor who had made a post-mortem examination said that the deceased suffered from heart disease. The stomach was full of undigested food. Deceased had only three teeth, and was unable to masticate, and the undigested food had pressed upon the heart. *Artificial teeth* "might have saved his life." The jury returned a verdict of death from heart disease. In connection with a recent paper by Sir H. Thompson, it is interesting to note that this individual did not refrain from eating food that required mastication because he had so few teeth. He simply swallowed it unmasticated.

ANNUAL STUDENTS' DINNER.—The annual dinner of the staff and past and present students of the Dental Hospital of London, will be held on Saturday, December 3rd, at the Holborn Restaurant, under the presidency of George Gregson, Esq. Gentlemen either now or formerly connected with the Hospital, or Medical School, who may, through inadvertence, not have received special notice, and who desire to be present, are requested to communicate with the Dean, at the Dental Hospital, 40, Leicester Square. The following gentlemen have up to date intimated their intention to be present:—Sir Edwin Saunders, Messrs. E. Apperly, E. J. Ash, W. H. Ash, H. Baldwin, J. H. Badcock, E. Bartlett, R. H. Bates, M. L. Bell, Tom Bird, H. Blandy, J. T. Browne-Mason, J. R. Brownlie, Mitchell Eruce, J. O. Butcher, Dudley Buxton, F. Canton, S. Cartwright, A. R. Colyer, J. F. Colyer, D. A. Cormack, G. Cunningham, F. E. Davar, M. Durlacher, L. Durlacher, H. Eskell, W. F. Forsyth, A. Gibbings, F. G. Grimsdale, F. A. Harsant, D. Hepburn, Alfred Hill, S. J. Hutchinson, W. H. Kendall, E. A. Manton, W. P. Paterson, A. Pearce Gould, H. Pedler, F. N. Pedley, J. Lee Pike, E. J. Preedy, A. C. Pritchard, F. Richardson, C. Robbins, C. C. Robinson, Claude Rogers, G. Seymour, S. W. Sibley, Morton Smale, C. R. Smith, L. C. Smith, W. Scott Thomson, E. M. Tod, C. S. Tomes, J. Smith Turner, A. S. Underwood, H. A. Washbourn, J. H. Whatford, R. W. White, G. O. Whittaker, Caleb Williams, R. H. Woodhouse, and W. H. Woodruff.

THE first meeting of the Odonto-Chirurgical Society (session, 1887-88), was held on Thursday, the 10th inst. Dr. Williamson, of Aberdeen, President, in the chair. In addition to his "Introductory" the President read an interesting paper on "Pivots."

THE Edinburgh Dental School opened the winter session on the 18th ult. There are at present on the roll nineteen students, seven of these being new entries.

THE Edinburgh Students' Society held its first meeting for the session on Monday, the 7th inst., when Mr. Matthew Finlayson, L.D.S., delivered a most interesting inaugural address.

WE are requested to state that Mr. Charles S. Tomes will preside at the annual dinner of the students of the National Dental Hospital and College, on Friday, 25th November, at the Holborn Restaurant.

FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—At the October sitting of the examiners the following candidate passed the first examination:—Mr. Edward J. Montague Hodgkinson, Clapham, London. The following passed the final examination, and were admitted licentiates in Dental Surgery:—Mr. John A. Biggs, Glasgow; Mr. Thomas Wilson, Glasgow.

ROYAL COLLEGE OF SURGEONS, EDINBURGH. — During the October sittings of the examiners, the following gentlemen having passed the final examination, were admitted Licentiates in Dental Surgery of the College: Ernest Edmund Taylor, Manchester; John Girdwood, Edinburgh; John Bain, Galashiels.

THE world is indebted to a member of the Association practising at Lahore for reliable information respecting the health of the Ameer of Afghanistan, about which so many conflicting statements have recently been made. Mr. O'Meara has lately returned from a professional visit to this ruler, whom he found in the enjoyment of excellent health, and very hard at work receiving all kinds of communications from all parts of the country, making notes on them, and then passing them on to different officials. Mr. O'Meara seems to have been very favourably impressed with the character of the Ameer, and to have been particularly struck by his energy and industry. He also appears to have been most agreeably surprised by the great consideration shown to himself both by the sovereign and by his people.

WE have received the first volume of "The American System of Dental Surgery," a work edited by Dr. Litch. We hope to notice it in a future number. Meanwhile it may suffice to say that in carrying out the plan of the work, which is of a very extended character, the editor appears to have chosen men, of whose fitness to treat their respective subjects there can be no question. The general execution of the work is a credit to the publisher; the book is beautifully illustrated, and the type, paper and printing are alike good. It will consist of three volumes of a thousand pages each, and will be issued to subscribers only at thirty shillings a volume.

WE have also received a copy of the second edition of Mr. Sewill's "Treatise on Caries." We have already expressed our

favourable opinion of the work, and the fact that it should have already run through an edition is sufficient evidence that the dental world have appreciated it. The present edition has scarcely been altered at all; perhaps the chief addition is a note from Mr. Charters White, to the effect that the amount of organic matter present in enamel is too small to warrant the acceptance of Bœdecker's views of its physiological functions and pathological changes. The form of the volume has been slightly changed, and the result is that it is certainly more handy than the first edition.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

The Dentists' Register.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—The strenuous efforts now being made by the Registrar of the Medical Council, to revise the Dentists' Register, must command the hearty appreciation of every member of the profession. Once put right, the question arises, How can we keep our Register accurate from year to year? At the meeting of the Midland Branch, held in Lancaster (October 22nd), this question was answered by an excellent suggestion, made by A. M. Matthews, Esq., to this effect:—That some one member of the Association should become responsible for the locality in which he resides, to take account of deaths, or removals, and report the same to the secretary of his branch. Acting on this idea, we at once secured twenty representatives for the Midland Branch, and before this letter appears, I hope to have obtained volunteers from the whole of our district. Permit me to suggest that, if each of the eight branches would adopt a similar plan, we might easily cover the country with a network of observers, whose watchfulness would go far to assist the labour of revision, and whose local knowledge might be of great service in other ways. There is nothing like giving men something to do, if you wish to secure their personal interest in any movement.

Yours very truly,

W. H. WAITE.

P.S.—A geographical register is being prepared for the use of secretaries, and when ready, lists of names, can be supplied to those who are willing to undertake the duty referred to above.

On the Mechanical Training of the Dental Student.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—I cannot help thinking that the discussion which followed the reading of Mr. Cunningham's interesting paper at the Glasgow Meeting of the British Dental Association hardly exhausted all that can be said on this important subject. As I was unable to attend the congress, I take the liberty to embody my views in a short letter.

I may, by way of preface, observe that I have had a large experience in the training of dental students, and that many of my pupils are now successfully practising their profession, not only in the metropolis and in the provinces, but in other parts abroad. I believe that three years is, if anything, too short a period to acquire a thorough knowledge of mechanical dentistry, for I do not think that any good results from making the work day longer than six hours. This enables the student to follow other branches of study whilst engaged in carrying out the usual terms of apprenticeship—indeed I have always advocated the blending of certain forms of study with mechanical occupations, as I consider that the one materially assists the other.

No one who has had any large amount of experience can have failed to notice that the student who has applied himself to mechanical work, does with greater facility acquire every other manipulative branch of his profession. It may, however, be urged that the attentive student in one department of study will usually apply himself diligently to all other branches. Still it will be seen at a glance, where the fingers have been previously educated, how differently they handle their stoppers, and indeed every instrument they are called upon to use.

Several of my pupils have in after life confessed that they owed the greater part of their successes to the early mechanical training they received, and I would also add that every practical school of mechanics has its advantages, but a young man who has passed through a well-appointed workroom hardly needs any extraneous helps, more particularly if he can only give four, or at most five, years to such acquirements.

I do not understand the word "drudgery" as applied to our present modes of practice. The good apprentice will commonly remark that he would sooner be at his work than remain idle, and that he is never so dull as when he has nothing to do. I have frequently asked the question, "Would you prefer to leave out all mechanical work and solely to depend upon your hospital training?" and been as frequently answered that "Without the workroom experience we should feel ourselves but half educated"; and, indeed, I am fully persuaded that to put work into the mouth successfully, or to make any alteration afterwards, a mechanical training is indispensable.

It is very true that many pupils have owned that they do not intend to do their own mechanical work when they commence for themselves,

yet all those whom I have had any opportunity of watching, and who have made any position in the profession, faithfully carried out their work-room tasks ; besides, it is nearly impossible for any man to say whether he may not be called upon at one period or another to do some description of mechanical work, particularly if he takes a practice abroad. I quite understand that it is nearly impossible to be master and man at the same time, and that with any amount of surgery work, activity in the workroom is out of the question, as Mr. Turner has urged.

In every instance where I have been consulted as to the education of a pupil, I have advocated a five years' apprenticeship, and never less than four years ; but we cannot always have our own way in these matters. I have, therefore, sketched out a three year workroom curriculum with the order in which the various processes should be followed, and general directions as to the management of the laboratory.

First of all it is essentially necessary that every workroom should have a competent foreman, for as the principal cannot be expected to work at the bench, his representative should have the control of all apprentices. During the first two or three months I recommend the new comer principally to content himself by looking on, and to be satisfied that he understands the various processes he sees about him. He may sometimes be engaged in preparing modelling composition, drip wax, and to see that all impression trays are fit for use. He can superintend the drying and indurating of models by dipping them in melted sterine or other composition, and gradually to get instructed in the running of plaster models and cutting up the same. The casting of metal dies and counter-casts should now occupy his attention, and finally, the casting of duplicates and preparing and packing pieces for vulcanizing. If the pupil shows an extra aptitude for work, he might be allowed to take plain vulcanite cases from the vulcanizer to the finish, and he should be well instructed in carefully finishing and polishing both metal and vulcanite work. During the first year, opportunity should also be given to make swivels, bolts and springs, so that all spare time may be profitably filled up, and some little variety be given to the work-room experience.

Added to the above operations the apprentice may, in the second year, be allowed to make trial pieces in wax and plates in pewter, with duplicate complete dentures for the purpose of taking accurate bites—one of the most delicate and important works that should engage the attention of the dentist. He should now be allowed to mount easy cases, and particularly instructed in the arranging of all kinds of regulating plates. Approaching the third year, his fingers being used to more delicate operations, gold and other metal plates should be commenced, and the greatest attention paid to all kinds of bands and attachments. Flat, vulcanite, and tube teeth mounting

now naturally follows, and the occasional preparation of a pivot-tooth carries with it a great deal of instruction, more particularly if those who are being instructed are allowed to come into the surgery. Now, if all these various mechanical operations are carefully gone into, the pupil will find that his six hours a day will be well filled up, and where several pupils are taken at the same time a commendable rivalry may be encouraged, but the instructor should never forget that to make work profitable and pleasing it should be systematized, although in the hurry of a sudden press of business this regularity may be somewhat interfered with. No doubt the time has arrived when we shall have to consider the education of mechanical assistants—men who do not desire to go through the curriculum or to be entered on the Register; but as this opens up another subject for discussion, I will not enter upon it. My object in these pages is to give an outline of what I consider the training of a student should be in the shortest time that can be allotted to the mastering of the difficult art he is called upon to learn.

I will conclude by observing that the greater part of these difficulties will be lessened by the student commencing his mechanical labours in the best school, never forgetting, as I have elsewhere urged, that the shortest way is sometimes a dangerous way, and frequently ends by being the longest. That a thing cannot be well done unless it is done in the most perfect manner; despising at all times makeshifts, he must never excuse in himself, or in any of those placed under him, slovenly or imperfect work, and these views should be ingrafted into the minds of all students, so that the desire to obtain perfection may follow them through life.

Yours truly,

FELIX WEISS.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—Will you please supplement my remarks in the paper on the Mechanical Training of the Dental Student with the following:—

In my paper on Dental Education I spoke in favour of the English rather than the American method of this training. What I had said was criticised by the reader of the paper in Glasgow.

The distinction between the two methods is very simple. The mechanical training in England is given in the workshop of a dentist during three years, supplemented by two courses of lectures on Mechanical Dentistry at a hospital. The American requires this Mechanical training at the hospital only. I advocated the English plan, and after hearing the discussion at Glasgow advocate it still more strongly. The best American curriculum requires three years professional study against four years in England (really requiring five years in most cases), and during this three years both sides of the profession are

taught simultaneously. I prefer the English system, which gets the mechanical training over before the operative begins, so that the student does not, as Mr. Smith Turner so well pointed out, combine the two.

Yours, &c.,

MORTON SMALE

The International Medical Congress.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—The information published from time to time during the organisation of the late Medical Congress at Washington, led many to fear that the meeting, if not a complete failure, was destined to be a much qualified success; and the reports which have now come to hand have shown that these fears were unfortunately too well founded. The causes of failure are not far to seek. America is the land of liberty; liberty which in many directions too often verges into license. I should be the last to disparage the advantages of complete freedom. I believe that American institutions will, in actual consequence of their perfectly untrammelled growth, develop in time into models for the rest of the world, but it will take time. At present there is a lack of discipline, and the result is frequently confusion. In the present case if it had been possible to place the organisation of the Congress in the hands of a solid representative body commanding universal respect, such as, say for instance, the Medical Faculty of Harvard University, we should have witnessed a different result. As it was, however, all the blatant individualities, the faddists, "cranks," and pseudoscientists, besides others whose motives were probably of a more than questionable personal character, were allowed to force themselves to the front, and to use the Congress either to air their crotchets, or bring their obscure personalities for once into prominence.

It is evident the dental section did not prove a greater failure than other sections of the Congress, the proceedings of many of them verging on the farcical. Not a single dental contribution of the least scientific value can be pointed out, and some papers seem to have been pure nonsense. It were surely a waste of force to summon the profession from the uttermost ends of the earth to listen to a case of "Chronic pyæmia from (*sic*) dental origin," and two cases of osteomyelitis. Cases of this kind unless observed and recorded with the utmost scientific precision are of course valueless. Nothing could be more loose and questionable than the narration of the cases at the Congress, and they certainly would form but poor pabulum for a small local provincial dental society, much less for a world's gathering of scientific practitioners. Of the papers, two were so inferior as to call forth vigorous protests against their serious discussion, and they were virtually rejected by the section, a motion being made to censure the

Executive Committee for accepting such contributions. I think the profession are distinctly indebted to Dr. W. C. Barrett and Dr. J. Trueman for taking upon themselves the invidious duty of moving the rejection of these pseudo scientific contributions. I am sure many of us sympathise with Dr. Barrett's protest against the acceptance of "such a mass of absurdities," as a standard by which to judge the intelligence of American dentists. This prompt and vigorous course is one to be much commended, and I trust the example will be followed, should occasion call for it, at other dental societies; for you, Sir, and other journals have hitherto occasionally had to chronicle the production and solemn discussion at American and British dental societies of contributions which were mere caricatures of science, calculated to throw ridicule upon the whole profession.

I should like to ask, Is it not open to serious question, which the late meeting tends to support, whether International Medical Congresses are really calculated to promote the advance of science? Is it not at least more than doubtful whether good scientific work needs the stimulus of such gatherings to bring it out? Is it at all likely that any scientific work of the least value would remain concealed for lack of a Medical Congress? A Congress has value perhaps in its personal and social sides. If a really representative international gathering of the profession can be from time to time assembled, it is not difficult to conceive that much good may arise from—so to say—the actual contact of personalities and individualities which, but for a Congress, might never have the opportunity of coming together.

I remain, your obedient servant,

X.

Dental Appointments at General Hospitals.

TO THE EDITOR OF THE JOURNAL OF "THE BRITISH DENTAL ASSOCIATION."

SIR,—A trained soldier or sailor is a very valuable national commodity; and no one will question the desirableness of keeping him in good health when once the expense of his training has been incurred. If, as seems certain, he is sometimes disabled more or less by preventable loss of teeth or curable dental disease, no argument is needed to prove the expediency of supplying adequate dental assistance in addition to the very perfect medical and hygienic supervision which our forces now receive—provided this assistance can be procured, and at reasonable expense. The appointment of dental surgeons paid by the State to the forces in ports and garrison towns might solve this difficulty. If it can be shown that the loss to the State through dental disability of the forces is sufficiently serious to make the step urgent there need be no doubt the authorities will lend a favourable ear to any practical scheme.

The first move might be to obtain the support of the chiefs of the

Army and Navy Medical Departments. These eminent men are always ready to promote objects which tend to enlarge the sphere of usefulness of their departments. The great good which might be done by attention to the teeth of the boys who, in great numbers, are always in training for the Navy, was some time ago forcibly demonstrated by Mr. Spence Bate.

These, then, I believe, are thoroughly practical and practicable objects ; but I do not at all see that the provision of adequate dental attention for the bulk of the population unable to pay, can by any means be considered in such a category.

Is it practicable even to provide dental surgery for children in the National and Board schools ? I doubt it very much. These children number vast thousands. Suppose one dentist were appointed to look after every 500 of children's teeth. To do much good he would need to examine every child at least twice a year. Suppose on the average each child required not more than one tooth filled annually ; besides the extraction of loose, foul, temporary teeth, and hopelessly decayed, aching, permanent teeth, operations which, among the poor, are so constantly necessary—not to speak of regulating teeth and the score of desirable operations always called for.

Bearing in mind the difficulties, delays and fatigue of working in children's mouths, is it possible to conceive of the work being decently done with a less average than two hours a year of time for each child ? This, with 500 patients makes 1,000 hours of the dentist's time. Suppose him to work six hours a day, which, I venture to say, is beyond the strength of the vast majority of men engaged in such arduous operations, he would be hardly able to attend to these patients while undertaking private practice. He would need a good salary for such work, and who is to pay it ? Will not practical men ask whether there are not things more urgently needed ? Will it not be pointed out there are sanitary matters much more urgently called for ; pure air, water, sanitary dwellings, open spaces, means of isolating infectious diseases, such as scarlet fever ? There are a thousand sanitary measures urgent, and requiring money to carry them out ; and to these ratepayers will look before they entertain schemes for universal dentistry of the kind proposed.

Let us be practical. Let us inculcate the necessity of dental cleanliness ; the desirableness, perhaps, of providing for poor children tooth-brushes and a supply of chalk and soap powder. Let us afford, at dental and general hospitals, aid in the way of extracting foul and hopeless teeth from which the children suffer so much, and thus be satisfied, without broaching unworkable utopian schemes which have not the least prospect of acceptance by authorities or the public.

Your Obedient Servant,

London, *Oct. 16th*, 1887.

ANTI-CANT.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

DEAR SIR,—The letters that have appeared in your Journal, notably those from "X" and "Studens," give prominence to a matter of great importance to our profession, and I cannot refrain from asking you to allow me a space in your columns for some observations thereon.

There is no need to discuss as to whether dental aid should be given to the poorer classes ; it is a question so potent and so demonstrative to those who have had opportunities of judging, that I am sure all must agree that its advisability is merely a matter of detail as to what extent and through what channel it ought to be given. The point, however, raised in those letters that deserves most careful attention is, whether dental relief can be better given to the poor in special dental hospitals or in a dental department attached to a general hospital.

Possibly something may be said on both sides of the question ; but I feel sure that if the general body of our profession is to gain in the end it will be found that if dental ailments are treated under the auspices and support of a large general institution for medical relief it will be less open to abuse and scarcely possible to be under the control of a very limited number of individuals, and would exist less for the advancement of personal ends, and more for the benefit of the profession in general, and for the *necessitous* poor in particular.

So far as the practice at a general hospital is concerned I entirely agree with "X" that it is highly desirable that a dentist should be upon the staff ; not only for the reasons which he adduces, but it must surely help to make dentistry a less abstract branch of surgery than it has been considered hitherto ; and medical students would have an opportunity of knowing that which has often to be taught them in after life, viz., that the proper treatment of the teeth cannot be acquired without the aid of a teacher.

There is another consideration ; that from a financial point of view ; it would be more economical. It must be obvious to all that a small hospital costs relatively far more to keep in working order than a large one. A large hospital very often gains by ensuring better management, and as a result it obtains a larger share of the confidence of the public who support such charity.

This, I take it, is no small matter for consideration when we bear in mind the lack of support given to nearly all medical charities ; we can scarcely expect that dental diseases will command more sympathy in their treatment from the benevolently disposed than these more general institutions.

Some Dental Hospitals are now scarcely able to make both ends meet without contemplating measures that must affect the welfare of young and struggling practitioners.

"Studens" in his letter says, "Unless the management is so arranged that it is not possible for one or two individuals to assume entire control, special hospitals do afford a fair field for the manœuvres of those desirous of advancing their own interests."

That this can be said of any hospital is a matter for regret. It must prove a source of great hardship to those younger practitioners who are already sufficiently handicapped by other means of advertising. It is known that Dental Hospitals are a means of increasing the incomes of members of their staff, and it is only reasonable to suppose that with increased competition in the future fac-similes of these institutions will become numerous for the advancement of personal ends, as alluded to by "X" in his letter.

Respecting some institutions, it may be wondered why their staff is so limited in number. Surely it would prove a distinct advantage both to the hospital and to the patients that the staff should be increased in number.

I should much like to hear arguments in support of this fact. I cannot help feeling that these advertising institutions which are now showing themselves have had some example given them.

The whole question of Hospital Reform however, is one that must soon be thoroughly examined; its abuse is a hardship to medical practitioners and must soon prove equally so to our own profession unless something be done to remedy these developing evils.

Dental Hospitals as institutions existing for teaching purposes are a necessity; but a properly organised Dental Department in a medical institution would be equally available for this purpose; it would command more confidence and it would ensure better supervision in its management, and therefore I fully agree with "X" and "Studens" that instruction for students and the treatment of dental diseases would be better if carried out through dental departments of general hospitals.

Your obedient Servant, L.D.S.

APPOINTMENTS.

MR. FRANK LANKESTER, L.R.C.P., Lond., M.R.C.S., Eng., has been appointed Assistant House Surgeon to the National Dental Hospital, Great Portland Street, W.

J. A. BIGGS, L.D.S.Glasg., has been appointed Lecturer on Dental Mechanics at the Glasgow Dental Hospital, *vice* Mr. W. S. Woodburn, L.D.S.Glasg., resigned.

OSWALD FERGUS, L.D.S.Glasg., D.D.S., has been appointed Clinical Demonstrator at the Glasgow Dental Hospital.

JAMES STEWART has been appointed House Surgeon at the Glasgow Dental Hospital.

NOTE.—ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Subscriptions to the Treasurer, 40, Leicester Square.

All contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

Members are reminded that their subscriptions were due in JANUARY last, and are requested either to remit them direct to the Treasurer, at 40, Leicester Square, or if more convenient, to pay them through their bankers, or through the agency of one of the Dental Depots, and so save unnecessary postage, &c., in applying for the same.

SPECIAL NOTICE.—All communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

NOTICE.—The new LIST OF MEMBERS is in Preparation. See Annotations.

THE JOURNAL
OF THE
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A
MONTHLY REVIEW OF DENTAL SURGERY.

No. 12.

DECEMBER 15, 1887.

VOL. VIII.

The Dentists Act.

IT has been said with much truth that it is easy "to drive a coach and four through most acts of parliament;" for even when the spirit of a written law may be unmistakeable, the phraseology is often so equivocal that judicial authorities when called upon to interpret an act are obliged to give decisions either neutralising or overthrowing the obvious designs of legislation. This being so, it speaks much for the wisdom of the framers of the dental act that so few flaws have been found in it. We hear complaints of existing abuses ascribed to defects in the act, but if these abuses be examined it will be found in most instances that they do not arise from defects in the law

but are really due to the deliberate intention of the legislature. Nothing could be more evident during the whole progress of promotion of the dental act—as well as of all medical legislation during late years—that no Ministry and no House of Commons would listen to projects for retrospective legislation ; or of interference with vested interests ; or of restriction of individuals *bond fide* practising a profession, and gaining a livelihood thereby prior to proposed changes. Some members of the Association seem still to be unaware of the fact that the penal clauses of the dental act give greater protection to the qualified dentist than is afforded to the medical practitioner by medical law ; but this is distinctly the fact. All attempts to pass a stringent act making penal the practice of medicine for gain by the unqualified have failed. The medical act goes to this length only and no further—it enumerates certain qualifications registrable under the act, and declares illegal the false assumption of such titles ; and it confers upon registered practitioners the right of holding offices under government, of recovering fees in the courts of law ; and such like privileges. It in no way prevents unqualified individuals from practising in any department of medicine or surgery, or from assuming titles so long as they abstain from those actually named in the act. Thus we see that any totally unqualified quack may with impunity style himself “doctor.” Against offenders of this kind prosecutions have been instituted over and over again, and they have always failed when taken to the higher courts. Such, therefore, is the anomaly of the law at the present moment that an unqualified man may assume the title Dr., and practice in any department of medicine and surgery without the risk of any penalty, unless he kill his patient and be charged with manslaughter. It is thus from the weakness of medical law generally, and not from defect of our dental

act, that most of the abuses complained of exist ; and those abuses are just as prominent and hurtful in other departments of the profession as in the dental. It must be remembered that if all unqualified practice for pay were prohibited much hardship would be caused, especially to the poor. For one instance, it would be impossible for a chemist to apply a strip of sticking plaster to a cut finger, or to purvey a dose of diarrhoea mixture to an urgent case, without incurring a penalty. It is the reluctance of legislatures in free countries to make laws of a searching paternal character which allows certain evils to exist. Dentists are really better off than doctors in this matter, for no one unregistered can assume the title dentist as he can that of doctor. So the unqualified person has to endeavour, by exercise of cunning, to palm himself off upon the public as a qualified dentist, and to avoid the commission of any technical offence. This is what the quack of the day aims at ; and his object is facilitated by the fact of which he now avails himself, that he may with impunity style himself "doctor." How easy to concoct a telling advertisement on these lines ! "Dr. Blank's dental establishment. Dr. Blank's patent teeth. Dr. Blank is at home at such hours. All dental operations are performed with superlative skill by Dr. Blank"—and so on through any number of lines, whilst upon the uninformed public the impression is made that the advertiser is a qualified man. To institute prosecutions against such individuals would be in many instances to court failure ; and hence the abstention of the executive of our Association from interference with them. Not only in the dental, but in every branch of the medical profession there are, and have been, both qualified and unqualified advertising quacks ; but their number and their power are diminishing. This is not so much from the effect of legislation,

as from enlightenment of the public, and from increase in numbers, and, above all, in worth, of the legitimate practitioners. To the influence of these causes we probably must mainly look for the further improvements for which we all hope and for which we are striving.

ASSOCIATION INTELLIGENCE.

Meeting of the Representative Board.

ON December 3rd a meeting of the Representative Board was held. J. Smith Turner, Esq., in the chair. The following members were present:—Messrs. Rees Price, W. Bowman McLeod, H. Blandy, W. E. Harding, T. E. King, N. Rogers, W. H. Waite, J. L. Pike, G. Brunton, J. Fenn Cole, George Cunningham, W. A. Hunt, E. Apperley, J. Dennant, C. H. Bromley, W. A. Rhodes, F. Weiss, J. R. Brownlie, F. Canton, T. Charters White, L. Matheson, T. Underwood, S. J. Hutchinson, J. H. Mummery, S. Cartwright, E. Lloyd Williams, Storer Bennett, C. West, C. S. Tomes, W. H. Coffin, Claude Rogers, G. W. Parkinson, A. Woodhouse, and Morton Smale. Letters of regret were read from Messrs. Browne Mason, and R. F. H. King.

The SECRETARY reported that the Medical Council had removed the name of Mr. H. F. Partridge from the Dental Register.

The thanks of the Board were voted to the Royal College of Surgeons in Ireland for their action in regard to that case.

Messrs. Rait and Kearton were re-elected auditors. Mr. Lee Rymer was elected member of the Journal and Finance Committee. Mr. Canton (*ex officio* as treasurer) and Messrs. Walter Coffin and L. Matheson were added to the Business Committee.

It was decided that the names of members of all the Committees should be printed at the beginning of the List of Members.

In reference to complaints about the conduct of members which had from time to time reached the secretary, it was decided that a list of questions tending to elucidate the particulars of each case should be printed, and that the hon. secretary should forward a copy to any member preferring a complaint, so that it might be filled up and returned in order to be laid before the Business Committee.

The following resolution, passed unanimously by the Irish

Branch, was read :—That the earnest attention of the Representative Board of the British Dental Association be directed to the correction of the Dentists' Register, and the maintenance of the spirit and provisions of the Dentists Act by such lawful means as may be necessary.

It was decided to take counsel's opinion with regard to a case of infringement of the Dentists Act, and if the opinion was favourable to prosecution, the Business Committee was authorised to proceed with litigation.

The TREASURER reported the balance at bank to be £506 10s. 8d., and that 84 members were in arrears for this year and 21 for 2 years.

Mr. WAITE reported he was in possession of the Geographical Register, and was at work to perfect it, when it would be circulated to the secretaries of Branches.

The following Sub-Committee was nominated to carry out the resolutions passed after the reading of Mr. Cunningham's paper at Cambridge :—Messrs. Weiss, Turner, C. Tomes, Charters White, and George Cunningham.

RESOLUTIONS.

That this meeting is of opinion :—

- (1) That wherever the State provides medical services, dental services should be provided for, as an essential part of such medical provision.
- (2) That, having regard to the great importance of securing competent attention to the teeth of the army and the navy, the Representative Board should consider the advisability of urging the Government to make suitable provision to that end.
- (3) That considering compulsory attention to the teeth of school children would be a national gain, the Representative Board should be empowered to further the matter in any way they deem most fit.

The attention of the Board was called to the fact that a member of the Association was carrying on "a dental institute," and violating the laws of the Association. The matter was referred to the Business Committee.

Mr. WEISS called attention to the incorrectness of the list of members.

The CHAIRMAN pointed out that all errors were due to the

neglect on the part of the members themselves in not informing the hon. sec. of changes of address, &c.

Mr. DENNANT called attention to the fact that Branches should elect their representatives on the Representative Board. The Hon. Secretary said every Branch should do this each March, and it was the Local Secretary's duty to put it on the agenda.

A letter from Mr. Henry Sewill was read calling attention to infringement of the Act in London.

Messrs. A. E. C. Woodhouse and Sydney Spokes were elected members of the Association.

Annual General Meeting (*continued*).

Friday, August 19th.

Dr. CUNNINGHAM then read his paper, as follows :—

On the Dental Aspect of Public Health.

MR. PRESIDENT AND GENTLEMEN,—Is there a dental aspect of public health? Most emphatically, yes. Mr. Fisher's paper on "the Compulsory Attention to the Teeth of School Children," may be said to have called it into existence at the Cambridge meeting of our Association, a paper which was ably followed up by his communication of last year on the same subject.

The paper "On Dentistry and its Relation to the State," which I had the privilege of laying before you at our last meeting, presented another view of this great question, which I trust has done something to promote its advancement. It would be premature to measure that advancement in any way at present, as the resolution that these papers should be published and distributed in the most likely quarters at the expense of this Association, has not yet had time to bear fruit, owing to the sad and unavoidable delay in the production of the preface through the long and regrettable illness of Sir John Tomes. The action of this Association, the approval and commendation of the excellent editor and Publishing Committee of the Association Journal, and still more the consent of our esteemed and revered leader to write a preface, constitute a recognition of the importance of the question as brought before you by Mr. Fisher and myself. That recognition by the dental profession, however important, however powerful and however complete, is at best but unsatisfactory. True, it is the first and essential step to success, but that success will only be

complete when the justice of our claims and contentions in this matter are as equally well recognised by the medical profession, the press, the public and the state.

The efficient treatment of so great a question must no longer be left in the hands of a few, no matter how energetic they may be, and the object of the present paper is to suggest some plan of campaign which may, after due discussion and approval, receive the weight and influence with which the corporate and united action of this Association can imbue it.

In order to advance this question, we must first consider how far our views fit in with the already recognised schemes of hygiene and sanitary science ; I shall, therefore, as far as possible, quote the actual utterances of some of the greatest authorities on the subject.

The first sentence in the late Professor Parke's work on practical hygiene, is characterized by a masterly conciseness, "Hygiene," he observes, "is the art of preserving health ; that is, of obtaining the most perfect action of body and mind during as long a period as is consistent with the laws of life. In other words, it aims at rendering growth more perfect, decay less rapid, life more vigorous, death more remote."

Dr. Wilson, in the introductory chapter of his excellent manual, discusses public health and preventable disease ; public hygiene he defines, "as that branch of sanitary science which concerns the physical condition of communities. It embraces a consideration of the various influences operating upon society, whether for its material good or its actual deterioration, with the view of extending the former and preventing or ameliorating, as far as possible, the effects of the latter. It involves the enactment of laws by which the safety of the whole may be protected against the errors of a part, and, above all, it aims at the prevention of disease by the removal of its avoidable causes. In a wide sense, therefore, the science of public hygiene enlists the services of the people themselves in continual efforts at self-improvement ; of the teachers of the people, to inculcate the best rules of life and action ; of physicians in preventing as well as curing disease ; and of lawgivers, to legalize and enforce measures of self-preservation. But while it is the special province of the medical profession, as guardians of the public health, to study the causes of physical deterioration and disease, and to point out how far these causes may be controlled or averted, the general well-being of the

people must mainly depend on their own exertions and self-restraint. Sanitary improvements in man's material surroundings, will not compensate for social transgressions against laws of morality, for public virtue is essential to public health, and both to national prosperity."

Accepting either definition, is it not at once evident that the achievements of modern dental surgery should constitute an important factor in the maintenance of public health, and that any scheme of public hygiene, which disregards the function of the dental practitioner in the prevention as well as in the cure of disease, is to that extent at least incomplete.

A little further on in Dr. Wilson's manual, we read that the vast amount of preventable disease with which sanitary science and sanitary legislation had to combat at the date of the passing of the Public Health Act in 1872 is evident from the report of Sir John Simon. He then estimated "That the deaths which occur in this country are fully a third more numerous than they would be if our existing knowledge of the chief causes of disease were reasonably well applied throughout the country, that of deaths, which in this sense may be called preventable, the average yearly number in England and Wales is about 120,000, and that of the 120,000 cases of preventable suffering, which thus in every year attain their final place in the death register, each unit represents a larger or smaller group of other cases in which preventable disease, not ending in death, though often of far-reaching ill effects on life, has been suffered. And while these vast quantities of needless animal suffering, if regarded merely as such, would be matter for indignant human protest, it further has to be remembered, as of legislative concern, that the physical strength of a people is an essential and main factor of national prosperity; that disease, so far as it affects the workers of the population, is in direct antagonism to industry; and that disease which affects the growing and reproductive parts of a population, must also in part be regarded as tending to deterioration of the race. Then there is the fact that this terrible continuing tax on human life and welfare falls with immense over-proportion upon the most helpless classes of the community; upon the poor, the ignorant, the subordinate, the immature; upon classes which, in great part through want of knowledge, and in great part because of their dependent position, cannot effectually remonstrate for themselves against the miseries thus brought upon them, and have in this

circumstance the strongest of all claims on a legislature which can justly measure, and can abate, their sufferings."

Everyone recognises the fact that the diseases with which the dental practitioner deals do not directly contribute to the death-rate, and that they are neither infectious nor contagious. Hence, doubtless, arises the utter indifference of the community with regard to them, nor will that indifference be removed until the contributory and indirect influence which they have on the death-rate is better understood. It has been pointed out in a recent address by the President of the Southern Counties Branch of this Association, that within 50 years the mean duration of life has advanced from 30 to 38 years. He ascribes this in a great measure as being due to sanitary progress, and describes it truly as a grand result. He believed that some part of that improvement in the general health and longevity was due to the exertions of the dental profession, because we knew that digestion could not go on without good teeth. Such remarks from one who is not only a distinguished member of our profession, but who, as an individual, and in his aldermanic capacity, has done much to promote sanitary measures, merit careful consideration by the public.

It will be easier, however, to obtain a recognition of the fact that the pain and misery arising from dental diseases form an enormous part of that needless animal suffering, which, Sir John Simon describes, as calling for indignant human protest, and as being of legislative concern.

In the inaugural address by Sir John Simon, as President of the Section of State medicine in the International Medical Congress of 1881, we find the following remarks, which seem pertinent to our contention that State dentistry should be included as a necessary part of the larger subject of State medicine.

First: "A few words on what may be called the general theory of our subject matter. The term 'State medicine' corresponds to the supposition that, in certain cases, the body-politic will concern itself with the health interests of the people—will act, or command, or deliberate, or inquire, with a view to the cure or the prevention of disease. Before any such supposition can be effectively realised, the science of medicine—that is to say, the exact knowledge of means by which disease may be prevented or cured—must have reached a certain stage of development; and, unless the science be supposed common to all persons in the State, the existence of State medicine supposes a special class of persons

whom the unskilled general public can identify as presumably possessing the required knowledge. Thus, given the class of experts to supply the required exact knowledge, the body-politic undertakes that, within the limits of its own constitutional analogies, it will make the knowledge useful to the community.

* * * * *

“And in the interests of health, the State has not only, as above, limited the freedom of persons and property in certain common respects, it has also intervened in many special relations. It has interfered between parent and child, not only in imposing limitation on industrial uses of children, but also to the extent of requiring that children shall not be left unvaccinated.

* * * * *

“It shows beyond question that the legislature regards the health of the people as an interest not less national than personal, and has intended to guard it with all practicable securities against trespasses, casualties, neglects and frauds.”--(Eleventh Report of the Medical Officer of the Privy Council, 1869, pp. 20, 21.)

Briefly applying these remarks to our own speciality, dental science has surely reached the necessary stage of development and as the class of experts to supply the required exact knowledge exists in the Dentists' Register of the General Medical Council, the body-politic should therefore undertake to make their special knowledge useful to the community, as has already been done in the case of the medical experts. May we too not justifiably claim that the legislature should recognise the fact that the health of the teeth and associate parts is an essential factor in the maintenance of the health of the people and, therefore, an interest not less national than personal, to be guarded against casualties and ignorant neglect.

In concluding his chapter on Preventable Disease, Dr. Wilson thus appeals for the active and intelligent co-operation of the people themselves in improving and maintaining their health. “Many, too, look hopefully forward to the vast benefits which would accrue if the relations between the public and medical profession, to which sanitary science owes so much, were entirely altered. Hitherto, the public generally have only enlisted the services of the profession when disease sets in, but it is contended, and with reason, that it would be a far wiser policy to pay the medical attendant so much a year, and thereby enlist his services in conserving the health of the household. To a certain extent

this policy is already carried out in club-practice and provident dispensaries, but there would be no difficulty in carrying it out as regards all classes of the community, if people could only be persuaded that it would be to their ultimate advantage, while the rate of remuneration to be paid to the medical attendant could be easily arranged on a fair and equitable basis. For it need hardly be said that so long as medical men are paid solely and simply for attempting to cure, it is obviously not to their interest to exercise their knowledge and skill in preventing disease, true though it be that the efforts of the profession generally are seldom lax in controlling those diseases which, without their intervention, would be sure to spread. Nor should it be overlooked that there is a long list of other diseases, appertaining to the domain of domestic hygiene such as those resulting from a vitiated heritage, intemperance, errors in diet, and irregular habits or modes of life, which might be largely controlled if the services of the medical practitioner were thus enlisted in the grand policy of prevention. But, unfortunately, the public credulity in the power of cure still reigns paramount, while their faith in prevention lies practically dormant ; and hence it is that quackery of every description continues to thrive, and the pills and potions which are so extensively advertised find a ready sale. This, however, is a matter in which the people themselves must take the initiative, and it has only been adverted to here in order to show how curative and preventive medicine might cordially go hand in hand for the promotion of the public health and the abatement of human suffering."

How often does not the earnest thinking dental practitioner deplore the fact that from the results of neglect the main function of his professional life is monopolised by long, tedious and often painful operations wearying alike to patient and operator, the outcome the result of having to treat the advanced lesions which have led to more or less suffering, and rendered imperative the resort to the dreaded dental visit ? Does he not ardently long for the wider spreading of that intelligence and common sense, unhappily as yet only displayed by a few even amongst the best educated and most prosperous classes, which will lead to his being employed in the treatment of these diseases in their initial stages before the suffering has been endured, when a short and comparatively trifling operation will give the maximum of comfort and durability at the minimum expenditure of time and of money on the part of the patient, and of his own limited amount of nervous energy and force.

Professor Parkes has pointed out that in cases where the rule of hygiene could not be followed out by the individual, the State steps in for the protection of its citizens, and enacts rules which shall be binding on all. "Hence arises what is now termed 'State Medicine,' a matter of the greatest importance. The fact of 'State Medicine' being possible, marks an epoch in which some sanitary rules receive a general consent, and indicates an advancing civilisation. Fear has been expressed lest State medicine should press too much on the individual, and should too much lessen the freedom of personal action. This, however, is not likely, as long as the State acts cautiously, and only on well-assured scientific grounds, and as long as an unshackled press discusses with freedom every step.

"A watchful care over the health of the people, and a due regulation of matters which concern their health, is certainly one of the most important functions of Government. The fact that, in modern times, the subject of hygiene generally, and State medicine in particular, has commenced to attract so much the public attention, is undoubtedly owing to the application of statistics to public health. It is impossible for any nation, or for any Government, to remain indifferent when, in figures which admit of no denial, the national amount of health and happiness, or disease or suffering is determined. The early Statistical Reports of the Army, by Tulloch, Marshall, and Balfour, directed attention to the importance of this matter. . . .

"When the effect of all these researches and measures develops itself, it will be seen that even great wars and political earthquakes are really nothing in comparison with these silent social changes."

Is it too much to demand that State Medicine should include State Dentistry? I think not. It is both the duty and the interest of the State to protect the helpless child from the results of dental as well as other disease, whether arising from the ignorance, the neglect, or the incapacity of the parents to provide the necessary treatment. In this consideration the very important fact should be recognised, that from a lack of attention in the period of their youth, men and women of the future are allowed to grow up with the inevitable certainty of future suffering, a large proportion of which can only be radically treated between the ages of from ten to fifteen years. This naturally brings us to the consideration of Mr. Fisher's contention for the compulsory

attention to the teeth of school children. No intelligent reader, whether professional or otherwise, can fail to admit that he succeeds in proving his case. Let me recall to your minds some of his facts. On examination of the mouths of the boys on board the "Mars" Training Ship, he found only 80 absolutely perfect mouths, while over 300 required the care of a dental surgeon. It is important to remember that this is the condition of affairs found in a strong healthy lot of boys, ranging from 10 to 16 years, so you can readily imagine what must be the condition under less favourable circumstances. It must be of concern to our legislature that many of these boys were rejected for the Royal Navy from the inefficiency of their dental armature, an inefficiency which there is no question the services of a scientifically educated dental surgeon could have easily removed.

In the Dundee industrial school for girls, out of a total number of 85, ranging in age from 7 to 16 years, he found 15 perfect mouths, leaving 70 requiring care or treatment; yet his conclusion was that this school has relatively a high percentage of good teeth.

In order to attract more general attention to this subject, I certainly think we ought to collect more statistics. If we could interest some of our senior dental students in this question, under the direction and superintendence of more experienced practitioners, they might devote a portion of their vacation to compiling statistics, alike with profit to themselves, the profession, and the public. It seems, however, that the permission to make such examinations is sometimes absolutely refused. Despite the support of the Army Medical Officer in Charge, I have been as yet unable to obtain permission for the examination of the boys in the Royal Military Asylum at Chelsea, which would be a valuable addition to our statistics, more especially as many of these boys afterwards join the army.

Some will be inclined, perhaps, to scout the proposition of compulsory attention as visionary and utopian, while others, admitting the advantages of such a scheme, may think they dispose of the question by stamping it as "rank socialism." Again, many hearty sympathisers with this great project, are at once taken aback by the economic difficulties of its institution. It is no use disguising the fact that this latter is a most serious aspect of the question; everyone will be quick to recognise the increased charge upon expenditure, but comparatively few have the power which you possess of realising that it would be rather a mere

transfer of liability already incurred in some other way, if not an absolute saving of expenditure in other directions. Without referring to the action which some of the American dental societies have taken in promoting attention to the teeth of school children, in France, where no powerful association such as ours exists, measures have been taken for the inspection and care of the teeth of children in the schools of Paris. The question may indeed be postponed for a time, but a sense of patriotism should urge us on to be leaders rather than followers in a movement which time itself will hurry on.

The compulsory nature of the scheme may excite a certain amount of opposition, the opposition to the present compulsory vaccination laws being quoted as an illustration. The case is not at all analogous, for it would be impossible at any time to make out the faintest shadow of a case such as that which may, no matter how unadvisedly, be made against vaccination in opposition to the measure we propose. Individual cases of resentment would be certainly rarer under a compulsory than under any permissive scheme.

The knowledge you already have, or ought to have, of the contents of Mr. Fisher's papers, may absolve me from making any further comment, except that I trust in the discussion you will treat it with that fulness which the magnitude and importance of the question merits.

Professor Parkes remarks: "Looking only to the part of hygiene which concerns the physician, a perfect system of rules of health would be best arranged in an orderly series of this kind.

"The rules would commence with the regulation of the mother's health while bearing her child, so that the growth of the new being should be as perfect as possible. Then, after birth, the rules (different for each sex at certain times) would embrace three epochs; of growth (including infancy and youth); of maturity, when for many years the body remains apparently stationary; or decay, when, without actual disease, though, doubtless, in consequence of some chemical changes, molecular feebleness and death commence in some part or other, forerunning general decay and death."

Whether we consider one or all of these several epochs of the life of the human being, it must be apparent to the most obtuse observer that no system of rules of health could ever be termed perfect which ignored the important role which the dental practi-

tioner is capable of performing in all matters which pertain to the teeth and surrounding structures.

I shall now ask you to consider for a moment that part of the subject to which I have more especially devoted my attention, viz., how this important matter affects the Services. The great amount of attention which has been devoted to military hygiene has contributed in no small way to the general advancement of public health, so, I trust, will this section of our work, in which you are invited to co-operate, be found to intensify and promote the views enunciated by Mr. Fisher. To quote again from Professor Parkes: "In many cases again, the employer of labour finds that, by proper sanitary care of his men, he reaps at once an advantage in better and more zealous work, in fewer interruptions from ill-health, &c., so that his apparent outlay is more than compensated.

"This is shown in the strongest light by the army. The State employs a large number of men, whom it places under its own social and sanitary conditions. It removes from them much of the self-control with regard to hygienic rules which other men possess, and is therefore bound by every principle of honest and fair contract to see that these men are in no way injured by its system. But more than this; it is as much bound by its self-interest. It has been proved over and over again that nothing is so costly in all ways as disease, and that nothing is so remunerative as the outlay which augments health, and in doing so, augments the amount and value of the work done.

"It was the moral argument, as well as the financial one, which led Lord Herbert to devote his life to the task of doing justice to the soldier, of increasing the amount of his health, and moral and mental training, and, in so doing, of augmenting not only his happiness, but the value of his services to the country."

Apart from this general argument, which might easily be shown to apply to our special view, there can be no doubt whatever, that the Army Medical Department recognizes the advisability and the necessity of remedial treatment other than that by mere extraction. If this were not the case no provision would have been made for the supply of tooth-stopping and scaling instruments. The nature of the provision, however, is so manifestly absurd that, in calling attention to the fact, we are doing a service alike to the soldier, to the army surgeon, and to the already heavily burdened tax-payer. Who, until the other day, ever supposed that

gold foil was provided for the filling of soldiers' teeth? Ask any army man you meet if he has ever known, or even heard, of any of that gold foil reaching the mouth of Tommy Atkins? In these days of Government enquiries, it might not be uninteresting to find out something about this misapplication of the nation's funds, for you, as experts, must recognise the utter impossibility of properly manipulating, not only the gold foil, but the amalgam and gutta percha also provided, with the absurd equipment of the instruments officially described as four scalers and stoppers and three excavators and roseheads. Nor is this all, not only are the materials provided absurd, and the equipment utterly inadequate, but the army regulations only provide for one such case to be kept at the head-quarters of each military district. The least intelligent inhabitant of this city will see the absurdity of the provision when he knows that the whole of Scotland constitutes but one military district. But even were the materials, the instruments, and the distribution of the equipment, all that we could desire, what is the use of it all if the army surgeon has had no training to furnish the necessary manipulative skill. The, perhaps, too meagre opportunities of obtaining this dental training, have been neglected by the army surgeon in his medical student career, and no provision is made for it in the special training which he has to undergo at Netley.

I succeeded in interesting a retired lieutenant-general of the British army in this question. He very kindly gave me a personal introduction recommending my scheme, which led to an opportunity of discussing the matter with the Deputy Director-General of the Army Medical Department. With regard to giving the training at Netley, he with perfect justice remarked that there was nothing specially military in that of dental surgery, and his only recommendation was that instead of bringing force to bear upon his department, we should endeavour to bring the matter before the General Medical Council, as well as before the ordinary medical school authorities, with a view to making such a training compulsory.

A reference to my paper of last year, will show that this contention on the part of the department had been foreseen, and we expressed a strong opinion in favour of the very views now advanced by the department. We cannot help feeling, however, that now the attention of the department has been called to this very important question, they should recognise and put in force

the power they undoubtedly possess of requiring all the army medical candidates to produce evidence of having received at least an elementary training in dental surgery.

My own impression is, that if proper steps are taken in this matter, it will be impossible for the department, when the subject is properly laid before it, to ignore a strong expression of opinion emanating from this Association.

In the opening address to the section of Public Hygiene, at the recent Dublin meeting of the British Medical Association, the Director-General of the Army Medical Department, contrasts the inferior physique of the men now offering themselves as recruits for the army, with those of twenty-five years ago. "The inferiority is shown by the difference in weight between the town and country-bred recruits, as well as by the greater frequency of rejection from insufficient capacity of chest, loss and decay of teeth, and diminutive stature." In order to prove this point he quotes certain figures, of which the following is an extract:—

CAUSES OF REJECTION.	1860-4.		1882-6.	
	Total No. Examined. 86,969	Ratio per 1000	Total No. Examined. 318,981	Ratio per 1000
	Total No. Rejected.		Total No. Rejected.	
18. Loss or Decay of many } Teeth }	1,140	13.11	2,975	9.33
Total rejected ...	32,324	371.67	132,563	415.58

It will be seen that notwithstanding his above statement the number rejected on account of teeth alone was 13.11 per thousand in the former period as against 9.33 per thousand in the latter. This is a seeming contradiction to the statement quoted above, but is possibly easily explained by the fact that the Short Service Army measure is in operation during the latter period, and that there is not the same necessity to exact so rigid a standard with regard to the teeth. There is no doubt that the Short Service System has had an important bearing in this respect. It must also be remembered that the chest measurements and the standard as to height, age, &c., being the first points to be considered, large numbers of these men never reach the teeth examination stage.

As the result of a careful and minute examination of the candidates in a London recruiting station, a very deplorable state of affairs was revealed. The statistics proved that each man had lost or would be the better for losing 3.36 and the existence of 4.09 carious teeth capable of preservation, giving a total average of 7.45 of defective teeth per man; 64 per cent. of the cases required scaling, while 70 per cent. were suffering from inflamed and ulcerated gums, and 27 per cent. with one or more cases of chronic abscess in the mouth. A calculation was also made that only 8 per cent. of these cases were such as were beyond the limits of remedial treatment, while of those who were accepted 98 per cent. would have been benefited by dental treatment on admission to the ranks.

Is it not the business of the State to see that the recommendations of the late eminent Dr. Parkes, long Professor of Military Hygiene in the Army Medical School, are followed out to their practical conclusion since he has shown that it is bound by its self-interest, from the proof that nothing is so costly as disease, and that nothing is so remunerative as the outlay which augments health? The expenditure in the scheme we propose would not be great, it would certainly lead to the improvement of the health, comfort and efficiency of the soldier, and thereby might well be expected, in the long run, to diminish and not increase the total expenditure of the department.

With regard to the navy, a practical admission of a different nature exists, showing the necessity of conservative dental treatment being provided. The memorandum for the guidance of recruiting officers published by Mr. Fisher in his first paper is still in force, with the exception that in the London district the Admiralty has extended the number of absent or defective teeth which disqualify a candidate from 5 to 7. This fact alone serves to intensify the importance of our present project whether regarded from the necessity of attention to the teeth in the services, or from the advisability of early attention to the children, since the majority of naval recruits come almost directly from the schools.

Another point of interest arises from the number of the teeth determined to disqualify, viz.: 5 or 7. As the teeth are symmetrically disposed in the jaws both in position and in number, it would be interesting to know why this oddity as to oddness exists. Which is the odd tooth with which the recruit can dispense, and where is it situated?

In December, 1885, the Admiralty entered into a contract with the authorities of the Dental Hospital of London, by which the latter, in consideration of a subscription of thirty guineas, undertook the dental treatment of all the recruits they might send during one year—34 marines, 14 boys, and one artificer were so treated; thus this number of desirable and in other respects efficient candidates, who would otherwise have been prevented, have been enabled to enter the Royal Navy and the Royal Marines. Is not this a tangible proof of the kind of service dental science can render the State? Nor should it be forgotten that this amount of service is small compared to what it might be. We have been given to understand that both the superintendent and the medical officer in charge at the recruiting station have reported favourably upon what was regarded as a mere experiment, so much so, that the contract has been renewed for another year. It is important also to note that the individuals themselves have expressed their great gratitude at the opportunity provided for conservative dental treatment, thereby giving them a fair start in the service, and only in one case has such an opportunity been refused.

While expressing our profound satisfaction at so practical a recognition of the benefits derivable by the State from the services of the dental practitioner, we must enter a protest at the nature of the recognition. Is it fair for the State, instead of employing the services of a dental practitioner who, in accordance with the regulations of that very State itself, has expended a prolonged period of study at a considerable cost, to so avail itself of the advantages of a purely charitable institution mainly upheld by the profession itself, and where the operations are necessarily executed by dental students. Provided the services of fully qualified dental practitioners are employed, we would ardently recommend the Lords of the Admiralty to extend the scope of the experiment to the recruiting stations throughout the country, as the necessary corollary of the success of the present experiment. If a competent dental adviser were to be attached to the Admiralty Recruiting Department, we are convinced that he would soon be able to prove to the satisfaction of the Department that it would gain by increasing, rather than by diminishing the stringency of its provisions as to the teeth of the recruits, while at the same time there would be an extension of the number of eligible candidates.

We will now endeavour to frame a scheme, which will provide the means of promoting the general objects of this paper :—

(1) Some serious effort should be made for the elements of dental surgery, with a short practical training in the dental department of general hospitals, where the treatment should be conservative as well as radical, being included in the ordinary medical curriculum. The action of the Middlesex Hospital authorities in this direction is well worthy of example. No medical student at this hospital can be fully signed up for his hospital attendance, until he has completed a three months' attendance on the dental department. If the General Medical Council could be induced to take the matter up, this point would be quickly settled.

(2) The influence of that great public educator, the press, should be acquired, as the questions raised are really more of public than professional concern. Many of the most influential newspapers have already published strong and eloquent leaders on the subject, more especially as raised by Mr. Fisher. In one instance, however, an influential local newspaper refused to notice the matter, on the plea that neither the Association nor the interviewer advertised in its columns. Such too often is the ignorant and bigoted view, imposed by the commercial proprietor on a hard-working literary staff, when a serious effort is made to remove the subject "from professional seclusion to the region of popular interest and practice."

(3) As a profession we must do something to cultivate a higher intelligence in this matter throughout all classes of the people. Is it not better to expend our funds in promoting these objects, rather than in law expenses for the prosecution of offenders against the Dentists Act? Is it creditable to our profession that it has been slow, where the charlatan and the quack has been quick, to perceive the advantages to be gained by a wide distribution of popularised literature on the teeth.

(4) Dental Health Lectures would not only become popular, but in the shape of cheap reprints, would be the best defence to the pernicious influence of the quack compilations from our own literature. To meet a not unnatural feeling that one practitioner might thus be placed in an advantageous position, compared to his brother practitioners, any lectures on the subject should be delivered by some visiting practitioner from another locality, unless the local dental society or branch approve of one of their own number as lecturer. Of course, if a series of lectures of Medical Health exists in any town, that is the movement with which dental lectures should be associated. Any isolated and

mere individual local action would be justly considered an infringement of professional ethics.

(5) Mr. Fisher's plea for the compulsory attention to the teeth of school children should be earnestly advanced. An increase in the number of such dental appointments as that at the Anerley Parochial Schools would do much to pave the way and create a confidence in, if not a desire for, the greater compulsory scheme.

(6) The insufficient but actual recognition already accorded to our special branch of surgery, in the army and the navy, warrants our bringing the matter prominently before the proper authorities. The most feasible plan would seem to be, to appoint an influential deputation of this Association to wait upon the Secretary of State for War and the Lords of the Admiralty.

(7) An appropriate sphere for the further discussion of the questions broached in this paper, would be the medical and sanitary associations, but more especially the public health section of the British Medical Association. If some of those of our own members, who hold the necessary qualifications, could be induced to bring the matter forward in these new and as yet untried fields of discussion, a fresh and ever widening impetus would be given to the movement.

Canon Westcott, in a recent work "Social Aspects of Christianity," justly remarks, "that none can doubt in which direction the current of public thought is setting, that never before has there been so wide and keen a sense of the unity of life, of social dependence, of the obligation to determine our mutual relations by duties rather than by rights." The recognition by the State, in the regulation of our professional education and registration, entitles us as a profession to exercise the rights, thereby granted, in public service wherever we deem that professional help can serve the State. But is it not our duty, as well as our right, to agitate for the due recognition of preventive and remedial dentistry as an essential part of State medicine and public hygiene?

RESOLUTIONS.

That this meeting is of opinion :—

- (1) That wherever the State provides medical services, dental services should be provided for, as an essential part of such medical provision.
- (2) That, having regard to the great importance of securing competent attention to the teeth of the army and the

navy, the Representative Board should consider the advisability of urging the Government to make suitable provision to that end.

- (3) That considering compulsory attention to the teeth of school children would be a national gain, the Representative Board should be empowered to further the matter in any way they deem most fit.

Mr. PEARSALL: I am very glad to tell you that, benighted as Ireland is in many ways, it is a great deal ahead of some places in this country. The Dublin Dental Hospital receives a grant from the General Post Office for the dental attention given to the employés. The Postmaster-General had a great deal of trouble with the employés absenting themselves from ill-health, caused by bad teeth, and he had an interview with the Treasury, and a grant of money was given so that patients suffering from dental trouble might be promptly attended to, and the result has been that the 22 per cent. of absentees has been reduced to about 7 per cent. Then the Masonic Orphan Schools in Dublin are also placed under the control of the dental officers in Dublin. Sir Arthur Guinness & Co., also with the view of making their employés more comfortable, give a handsome subscription. There is one point that Mr. Cunningham might have dealt with. We take a deeper interest in the police in Ireland than you do here, and I think the police just require as much attention as the Army and Navy.

Mr. ROSS WATT: I have great pleasure in supporting Mr. Cunningham's resolutions, and I would draw his attention to a class that I think he has over-looked, and one that I have given some attention to during the last 18 years—the county reformatories for boys. For the last 18 years I have attended to the teeth of the boys in the Warwickshire Reformatory gratuitously, and my position was never recognised till last summer. I have had half a dozen lads in a day sent over to have their teeth examined before passing the examination into the Navy.

Mr. SMITH TURNER: I think the importance of Mr. Cunningham's paper cannot be over-estimated, and I hope the Association will consider it its duty to try and keep the question before the public through the medium of the press till we can make some representations to the authorities. I think there is no use going to the authorities till a healthy public opinion is created.

Mr. BROWN MASON: I have much pleasure in moving that the

three resolutions made by Mr. Cunningham be adopted by the meeting.

Mr. KING : I have very great pleasure in seconding the proposition. .

Mr. CUNNINGHAM : Mr. President and Gentlemen, It is very important to know that the Dental Hospital of Dublin is being used by the State, and that the General Post Office of Dublin goes the length of £10 by way of recognition of the Dental practitioner, but we cannot be satisfied with that, except as the best possible evidence of the practical nature of our contention as to State Dentistry. Such facts prove that our views are neither so visionary nor so utopian as are sometimes asserted. The statistics of the results of that dental attention on the health of the Post Office employés is extremely valuable, and I think we ought to have more statistics of that kind. With regard to the Dental Hospital of Ireland, there is one fact to which I should like to call your attention, and that is that it was the first to introduce the short course for army and navy surgeons. The London Dental School, for some reason or other, thinks it better to discourage, a short course of this kind. I am glad to know that the Irish masons are ahead of us on this question, and I would like to call attention in Protestant Scotland to the fact that the Roman Catholics, in their convents and other places, pay more attention to the care of children's teeth than the Protestants in their schools.

I hope that you will adopt the very moderate resolutions which I have proposed, and that the Representative Board will find some means of giving them force.

The President then put the resolutions to the meeting, when they were unanimously adopted.

THE 1888 MEETING.

THE PRESIDENT : There is one communication which I should like to read to you, and it is contained in a letter from a gentleman in Birmingham, writing to a member of the Association, a representative of the Irish Branch. "I hear that you are to have the British Dental Association in Dublin next year, having beaten us by three votes. Accept our best wishes, and be sure that the majority of us will come over to enjoy a visit to your fine city next August."

DEMONSTRATIONS.

The members of the Association then went to the Dental

Hospital, George Square, where Mr. Kirby demonstrated his electrical mallet and engine, and other members performed operations.

Central Counties Branch.

A MEETING of this Branch was held on Thursday, November 17th, at 71, Newhall Street, Birmingham, under the presidency of W. E. Harding, Esq., of Shrewsbury. There were present—Messrs. B. Neale, F. E. Huxley, F. H. Goffe, W. Palethorpe, F. W. Richards, G. O. Richards, Roff King, Charles Sims, J. S. Crapper, F. J. Thorman, W. R. Roberts, W. Madin, P. S. Naden, H. Grove, R. Owen, F. R. Howard, E. Sims, C. Batten, C. F. C. Matthews, E. D. Vinrace, and J. Humphreys, Hon. Sec. Instead of a paper, the President and Mr. Frank E. Huxley related their experiences at the late International Congress in America, which proved of so much interest that it was unanimously decided to postpone the further communication, which will include Dr. Farrar's System of Regulation, until the next meeting.

Mr. HUXLEY gave a practical demonstration with Stamer's plastic gold.

At the next meeting, to be held in January, besides Dr. Farrar's System of Regulation by Mr. W. E. Harding, a paper upon the Ill Effects of Salivary Calculus on the Teeth and Gums will be read and illustrated by models by Mr. J. S. Crapper. Mr. Jordan Lloyd will exhibit a rare odontome. Mr. W. R. Roberts has promised to exhibit a large epulis, and Mr. R. Owen a communication upon the electric mallet.

Southern Counties Branch.

THE autumn meeting of this Association was held at the Town Hall, Brighton, on Saturday, Nov. 19th. In the unavoidable absence of the President (Alderman Rymer, of Croydon), Mr. J. H. Redman (the Hon. Treasurer of the Branch) was voted to the chair, and the following gentlemen were present:—Messrs. D. W. Amooore (St. Leonards), W. Barton (Eastbourne), D. Caush (Brighton), E. T. Cooksey (Worthing), C. M. Cunningham (Hove), J. C. Foran (Eastbourne), Octavius Fox (Brighton), R. E. Feltham (Hove), Beadnell Gill (Upper Norwood), Walter Harrison (Brighton), S. Johnson (Hove), Rhys Price (London), James Rymer

(London), J. H. Reinhardt (Brixton), S. T. Silvester (Croydon), John N. Stoner (Brighton), C. Barrington Stoner (Brighton), Ewen M. Tod (Brighton), J. T. Whatford (Brighton), J. H. Whatford (Eastbourne), J. E. Welch (Brighton), J. Cornelius-Wheeler (Southsea), T. W. C. Wonfor (Brighton), W. R. Wood, jun. (Brighton), and J. Dennant (Brighton), Hon. Secretary.

The HON. SECRETARY said he had received letters and telegrams from several members, including their President, expressing regret that they were unable to attend the meeting. He also read a letter from the hon. sec. of the Midland Branch, informing them of Mr. Mathew's suggestion, which had been approved at their last meeting, that some one member of the Association in each town should undertake to look after deaths and removals in his locality, with a view to secure a correct register. The members present approved of this suggestion, and a number of towns in this Branch were there and then provided with a responsible agent for this purpose. The hon. secretary then referred to the importance of extending the influence of the Association, by personal efforts to secure fresh members, and announced that the council were hoping to hold an extra and informal meeting at Hastings before long, when they would be able to invite members of the profession at that end of the district, which they hoped might be of use in awakening interest in the work of the Association. They would also turn their attention to other portions of the district in course of time.

Mr. WALTER HARRISON showed models of interesting cases, one being a case of epulis, another of supernumerary tooth, and a third being a case of harelip, and abnormal position of premaxillary bone, which had come under his observation at the Children's Hospital, Brighton.

Various other models of abnormalities and cases of irregularity were shown and explained by the Chairman, Mr. Foran, of Eastbourne, Mr. Whatford, of Brighton, Mr. Silvester, of Croydon, and Mr. J. H. Whatford, of Eastbourne, the latter showing two models of gemminated teeth, taken from the mouths of two brothers, one showing the peculiarity in the permanent teeth, and the other in the temporary series.

Mr. JAMES RYMER then read the following paper :—

Gouty Periostitis.

MR. PRESIDENT AND GENTLEMEN,—Having had to treat (with what I consider considerable success), within the last few months

several cases, which I class under the above name, it occurred to me that a little discussion on this subject might prove of value. I will first shew a model, and then will read you a typical case, which I published in the August number of the JOURNAL OF THE BRITISH DENTAL ASSOCIATION. This model I took last Tuesday from a man, æt. forty-five, who had suffered with attacks of gout for years; you see the teeth are much worn down, this ground-down condition being due, I think, to two reasons, one, defects in the tooth structure; two, to abnormal attrition, secondary to gouty dyspepsia; there is no sensitiveness of the teeth, hard secondary dentine taking place of the pulp, as you can also see, the left upper molar well out of its socket; this is one of the symptoms described, viz.: "often the teeth tend to work out without caries from an osteitis, extending from the neck along the root to the apex," and Dr. Milner Fothergill says there is often a well marked osteal growth along the fang of the canine—this I have never seen.

Now to return to our subject; you can see by the model that the gums, especially the palatal surface is considerably swollen, this has extended from the alveolar dental membrane to the gum; this patient has suffered for years from attacks from gout, and for several years he has been subject to intense pain, confined to alveolar margins; this is evidently a manifestation of gout confined, as it may be, to the alveolar dental membrane; just as it may be localised in the "big toe." Treatment locally, counter irritant Pot. Iod. gr. iv., and Pot. carb. Now the case I published is as follows:—

J. B., æt. forty-five, came to the National Dental Hospital last summer, complaining of intense aching pain (which had prevented his sleeping for two or three weeks), this pain differed from ordinary periostitis, viz., it was not affected by heat or cold. *Examining mouth* there were no carious teeth to account for his pain; teeth were worn down; slightly loose; gums little inflamed. *Patient's history*: for years he had suffered from gout, his joints had chalky deposits, tophus of ears and reedy nails. Having excluded all the ordinary causes of periostitis, I came to the conclusion that it was an attack of gout confined to the alveolar dental membrane, and so was a proper case for the dentist to treat. Locally I applied chloride of zinci, internally Pot. Iod., gr. v., with Pot. carb. He commenced to improve in three or four days, and in three weeks was in perfect health, with gums, &c., in normal state.

Remarks.—It seems clear to me that the dental periosteum is as suitable a membrane as the synovial membrane for gouty inflammation and chalky infiltration, which naturally causes pressure on the dental nerves, &c., so in obscure cases of periostitis we should far oftener suspect gout of being the cause, and so order internal remedies that will produce rapid absorption. Perhaps some of our more experienced members will be able to endorse my remarks, as very little upon this subject is to be found in any of our "text books."

This paper was then discussed by Messrs. Beadnell Gill, Price, J. H. Whatford, Redman, Dennant, Rheinhardt and Harrison.

Mr. Welch exhibited the model of the mouth of a child, eleven years old. He said the central incisor on the left side is turned half round and resembles a molar in shape, the lateral is an exceedingly small round sharp peg, and the first bicuspid is turned partly round.

The child was born with two teeth, a central and molar, which I am enabled to lay before you; these teeth are well formed and interesting specimens. It is not very uncommon for the incisors to be erupted before birth, but I think very rare for a molar to be so erupted.

When quite a baby the little patient suffered from a gathering on the cheek (probably a lacrymal abscess), a piece of bone came away (this sequestrum will be passed round), leaving a disfiguring scar on the face.

The father has a similar scar caused by his being thrown from a cab and getting his jaws broken; it is supposed that this may have had some influence on the child, but I fail to see it. He was treated by Sir John Tomes and Sir James Paget, and a report of the case appeared in the *Lancet* in 1862.

At eight years of age the child had no teeth on the left side of the upper jaw, all the other teeth had appeared in the usual course, and so far as I am able to learn, the remaining temporary teeth never have appeared, and it is only quite recently that the permanent teeth have been erupted and present the appearance shewn on the model.

Mr. DENNANT exhibited an intercepting gas-bag stand, for administering gas in connection with the gasometer, and which had been made for him by Messrs. Coxeter and Son. It consisted of a brass tripod, fixed in a ring of walnut-wood as a base, which supported a $\frac{7}{8}$ -tube, 23 inches long, at the bottom of which

was a stop-cock with screw threads at the end to receive a union joint, fixed in a few inches of india-rubber tubing, attached to the gasometer pipe beneath the floor board. In the middle of the stand-pipe was a slot (to admit the escape of gas), over which was fixed the india-rubber bag, and when in use this bag responded to the action of the lungs, which was an item of comfort to the administrator. In the floor was a brass plate, $4\frac{1}{2}$ inches square, with a brass plug, $3\frac{1}{2}$ inches in diameter, which, when removed, allowed sufficient room to insert the hand to connect the pipes, and when the administration was over, the removal of the stand left a perfectly clear floor space, the fitting itself being unobtrusive.

He had had it in use for twelve months with the most uniformly satisfactory results. He did not claim more for it, than that it was a very convenient and easily adjusted arrangement for administering gas on the most approved principle, namely, that of having a volume of gas close to the face-piece, for there was only a 3-foot 6-inch length of flexible tube between the stand and face-piece. The advantages of this arrangement for those practitioners who had to supply the gas, as against the administration from steel bottles, was the agreeable temperature as compared with liquid gas, a very distinct gain for delicate lungs. Then there was the absence of the hissing noise, which sometimes excited the fears of nervous patients; and the absolute freedom from all danger of explosion of india-rubber tube and bag.

The simplicity of the arrangement, and its silence in working, had produced very favourable impressions upon medical men who had been called in to administer, and he thought, therefore, he ought to show it to them that evening; he felt quite sure if they would turn the contents of their steel bottles into gasometers, and administer after this principle, they would be delighted with the result. If the gasometer was kept in the operating room close to the chair, this arrangement would not be necessary, but for those who thought the gasometer an unsightly object, and who preferred to keep it in an adjoining room, it would be of value. He had a gauge or indicator in his operating-room, which enabled him to see the exact condition of the gasometer, as to gas used.

The hon. sec. announced that the Council had elected to the Association and Branch that evening, Mr. Arthur King, L.D.S. Eng., of Fitzclarence House, Southsea, and as members of the Branch, Mr. C. M. Cunningham, D.D.S. Mich., and L.D.S. Edin., of Church

Road, Hove, and Mr. A. Mountford, L.D.S.Eng., 3, Beaumont Terrace, Bournemouth.

A vote of thanks to the chair terminated the proceedings.

West of Scotland Branch.

THE Annual General Meeting was held in the hall of the Faculty of Physicians and Surgeons, St. Vincent Street, Glasgow, on the 24th November, at 8 p.m.

Mr. J. R. BROWNLIE, President, in the chair.

After the usual preliminary business, the Hon. Secretary read his report as follows :—

During the past year two gentlemen have been admitted members of the Branch, bringing the total membership up to 41.

Eight Council Meetings and five monthly meetings of the Branch have been held.

The Council, through the Representative Board in London, were successful in inducing two individuals, not on the Dental Register, to remove the word "Dentist" from their door-plates. The result was obtained without prosecution.

The Council also induced the Representative Board to take up the question of unregistered men assuming such designations as Dentorium, Dental Laboratory, &c. The Representative Board took counsel's opinion whether such designations fell within the wording of the 3rd clause of the Dentists Act, and it is much to be regretted that the legal opinion was unfavourable. The Board declined to take further action on the matter.

The Council, through the Hon. Secretary, have ensured that under the title "Dentist," in the Glasgow Directory for 1887-8, only the names appear of those gentlemen on the Dental Register.

The Council, through one of its members, were successful in preventing any dental show case being exhibited in the Industrial Exhibition at Burnbank, Glasgow, last autumn.

The Council, with the aid of the Representative Board, are also hopeful that they have ensured that no dental show case or dental advertisements shall appear in the Glasgow International Exhibition, 1888.

The British Dental Association met in Glasgow last August. The Committee of local practitioners, appointed to make arrangements for the meetings, raised the necessary guarantee

fund. The Association were entertained by the West of Scotland Branch on the Saturday, and for this and all expenses, the Committee only found it necessary to call up two-thirds of the guarantee fund.

One noteworthy feature of the meeting was the large sum collected at the dinner on behalf of the Dental Benevolent Fund. The donations amounted to upwards of £150, the largest sum ever collected for the fund at one time.

On the motion of Mr. W. S. Woodburn, a vote of thanks was accorded to the Hon. Secretary.

The Treasurer's report showed a balance of £6 in the Branch's favour, after payment of a donation of £10 to the Benevolent Fund.

The following gentlemen were elected office-bearers for the ensuing year:—*President*, James Cumming, L.D.S.Glas.; *Vice-President*, John Melville, L.D.S.Glas.; *Treasurer*, J. A. Biggs, L.D.S.Glas.; *Curator*, A. B. Young, L.D.S.Glas.; *Council*, W. S. Woodburn, L.D.S.Glas.; J. Moore Lipscomb, L.D.S.Eng.; W. F. Martin, L.D.S.Glas.; W. S. Gillespie, L.D.S.Glas.; Oswald Fergus, L.D.S.Glas.; *Hon. Secretary*, Rees Price, L.D.S.Eng.

Mr. J. R. Brownlie then vacated the chair in favour of Mr. JAMES CUMMING, who read the following address:

GENTLEMEN,—I can assure you I do not know how to thank you for the honour you have done me to-night in voting me to this chair. It is with considerable personal misgiving I accept it at your desire. I feel it to be no easy matter to take such a responsible position, and attend to all its details in such a masterly manner as my predecessor in office, Mr. Brownlie has done. I beg, however, to assure you I am deeply thankful for the honour, and shall do all in my power to further the interests of both our Branch and the parent association.

After the valedictory words of Mr. Brownlie, I am perplexed as to what to say. Not for lack of subjects, however, as there are plenty, but rather for lack of ability to take up one and lay it before you in such a way as to give interest and arouse in us all more enthusiasm in the public affairs of our profession.

You know the old proverb, "Charity begins at home;" I would, therefore, just make a remark or two upon the past, in connection with our own Branch. We began, as most of you are aware, as a society, immediately after a number of us had passed our exami-

nation and had been admitted as licentiates in dental surgery. This first effort to further the interests of the profession in which we had gained a legal and honourable standing, was good and desirable ; but we had not wrought very long together as a *society* of licentiates in dental surgery, before it was thought by some that our title and position were too exclusive. I remember well what I think was the turning point in our career.

Our esteemed ex-president and myself went to the Plymouth annual meeting together. While in London we called upon Mr. Turner. In our conversation with him, this subject was brought up. From that time Mr. Brownlie resolved to do his best to rectify matters, and form our society into a branch of the British Dental Association. There was considerable difficulty you are aware, but it was overcome—not, however, without loss at the time to our numbers, which we did regret, as we were quite few enough and our object was rather to increase our numbers. We rejoice now to say that we have stronger proof every year that we acted rightly. Our metamorphosis from an exclusive sect to a branch of the British Dental Association has proved a success which we all rejoice in. We have added considerably to our numbers, and will be glad to admit every respectable practitioner in the West of Scotland, or indeed from anywhere, who desires to forward the true interests of our profession.

This is, no doubt, a step in advance, but unless it be now backed up by each and all of us making a decided effort in working for the interests of our profession, we cannot expect that the disreputable doings of so many in our midst can be successfully overcome.

There are eight branches attached to the British Dental Association throughout the kingdom, but whether it be for want of judicious watering or not, the leaves are not appearing on branches or stem so fast as we have a right to expect.

Speaking for ourselves, I think a little individual enthusiasm is needed, that we may show to the stray leaves in our neighbourhood that it is to *their* true interests, as well as to ours, that they should attach themselves to branch and stem. Then the evils in our midst can be successfully grappled with. Instead of saying anything farther on this point, I would ask you to read, if you have not already done so, Dr. Waite's address on "The Constitution and Working of the British Dental Association," and also the editorial article on the same subject, in this month's journal.

They put the question in a much stronger light than I could. By digesting this subject thoroughly between this and our next meeting, I hope we may be able to do something in the good cause.

There is another point in our progress I cannot allow to pass unnoticed. I would remind you of the great honour we had, as a Branch, paid to us last August, by the British Dental Association coming to our city and holding its Annual Meeting here; but that was not all. It found in one of our members a gentleman of sufficient talent and professional ability to bestow upon him the highest honour it can give, by voting him to the chair as president. Surely this is an honour to us as well as to him. We could not have a better stimulant than this to encourage us to strive for the development of the interests of the Association.

I desire also to remind you that we have arrived at, what I may call, a critical period of our history. We have just completed our apprenticeship to this kind of society work, and greater things will now be expected of us. Allow me to apply this by relating an incident in my own experience, and which occurred in the older days of dentistry, when a seven years' apprenticeship had to be served. It came about in those days that I was just about completing that eventful period, and I thought my good governor was woefully ignorant of the fact. I entered his presence one day with beating heart (I mean beating much harder than usual), and informed him. The news seemed to tickle him a bit. He impatiently put up his hand to his head, passed a finger or two under his wig, and made them move vigorously, saying, "I did not think it was that time." I instantly saw the news had penetrated the right place, and I began to feel as if all was over with me. My *progress* in the past seven years flashed upon me. I thought that whatever I had done must be far below the mark. I felt I had wasted opportunities of doing more, and I began to fear I was to be cast adrift and probably become a useless hulk. Those were thoughts of a second or two, while he was thinking what to say. He said, very encouragingly, "I hope you are not going away, I have been very well pleased with you." You can fancy those were soothing words. I took courage and with some degree of confidence replied "No, if we come to terms." "Very well," he replied, "away down to the workroom and get on with the work, and I shall see and make terms." At this time I was sort of foreman and had three apprentices under me. I *went* down to the

workroom with such a degree of *consequence* that they all saw there was something up. Gentlemen, we are much in the same position as I was then ; only this difference, you have made me governor. I hope you are not going away ; I have been very well pleased with you ; I shall try and make terms. Away down then to the workroom and get on with the work ; make the apprentices both see and feel that there is something up. I have given you a very imperfect impression, but I want to see what you will make of it. Model it up for yourselves individually ; bring forward the work month after month respectively ; present it in a form that all may admire it. The governor will be more and more pleased with you ; rest assured you shall get good wages and a tangible rise in the approbation of your fellows.

Mr. J. R. BROWNLIE showed models of the mouths of three people in one family, who had, more or less, a retarded dentition and peculiarly shaped teeth. The first models were those of a girl nineteen years of age, who had but eight teeth in the upper jaw and twelve in the lower. In the upper jaw, besides the two centrals, there were two bicuspid with the permanent canine between them on the right side, and on the left side one bicuspid, the permanent canine and the temporary canine. The lower jaw showed, counting from the right side, the first permanent molar, two bicuspid, permanent canine, one temporary and three permanent incisors, permanent right canine, the temporary canine and two bicuspid. The models of a boy of sixteen showed in the upper jaw no left lateral, and a temporary right lateral, with thirteen teeth in all. And in the lower jaw the right canine was transposed and twisted on its axis. The models of the third member were like the others, very small and peculiarly shaped.

Mr. S. WOODBURN showed some fine specimens of the fossil teeth of the shark and mastodon found in America and in Norfolk.

Casual communications were also brought forward by Mr. CAMERON and Mr. CUMMING.

After a vote of thanks to those gentlemen who had contributed communications, the meeting adjourned.

Irish Branch.

A MEETING of Council of the Irish Branch was held in the Board Room of the Royal College of Surgeons, in Ireland, on Thursday, December 1st, Daniel Corbett, M.R.C.S., President-

elect, in the chair; R. H. Moore, F.R.C.S.I., Vice-President; Robert Hazleton, Hon. Treasurer; Daniel Corbett, junr., R. Theodore Stack, M.D.; A. W. W. Baker, M.D.; A. F. Thomson, J. O'Duffy, Chas. Wall, J. McStay, and W. H. Elwood attended.

The HON. SECRETARY (W. Booth-Pearsall), F.R.C.S.I., read correspondence with the Registrar-General of Ireland in reference to section 36 of the Dentists Act, drawing attention to the names of deceased practitioners retained on the Dentists' Register. It was resolved to forward the necessary corrections with respect to Ireland to Mr. Miller, in London.

Mr. A. E. THOMSON proposed, and Mr. MCSTAY seconded, the following resolution which was put from the chair and adopted: "That the earnest attention of the Representative Board of the British Dental Association be directed to the correction of the Dentists' Register, and to the maintenance of the spirit and provisions of the Dentists Act by such lawful means as may be necessary." It was also resolved that a correct list of dentists on the Register be forwarded to the proprietors of Thoms' Directory.

Messrs. Corbett, Moore, Hazleton, Corbett, junr., A. W. W. Baker, R. Theodore Stack, and W. Booth-Pearsall were appointed a committee to prepare a report for a scheme of work for the August meeting of the Association, to be presented to the Branch meeting on December 10th.

The following communications were provided for the Branch meeting, to be held in the Royal College of Surgeons, on Saturday, December 10th: W. Booth-Pearsall, "On Improvement of the Voice in Cases of Congenital Cleft Palate, by Mechanical Aid." R. Theodore Stack, M.D., "On the Balkwill Tube," and some interesting casts and specimens will probably be brought forward.

The first meeting of the Irish Branch of the British Dental Association, was held on Saturday afternoon, December 10th, in the Albert Hall of the Royal College of Surgeons in Ireland, St. Stephen's Green, Dublin. After an address by the President, Daniel Corbett, M.R.C.S., papers were read "On Improvement of the Voice in Cases of Congenital Cleft Palate by Mechanical Aid," by W. Booth-Pearsall. "On the Balkwill Tube," by R. Theodore Stack. "Dentistry, Dentistry and the Public," by Charles Wall.

Mr. Booth-Pearsall exhibited a sample of plaster of Paris, Mr. A. J. Watts an indestructible flask for vulcanite work, and Mr. Charles Wall a new form of tooth brush.

On the same evening, by the kind permission of the Committee of the Dublin Art Club, the Irish Branch held a *Conversazione* in the annual exhibition of the Dublin Art Club, 35, Molesworth Street, at which many of the leading hospital physicians and surgeons in Dublin attended by invitation of the President and Council of the Irish Branch.

Owing to the date, we are unable to give fuller particulars of the meeting.

ORIGINAL COMMUNICATIONS.

Referred Neuralgias.*

BY DR. MAUGHAN.

OUR systematic text books tell us but little on the nature of neuralgia, still less on that of referred neuralgia. They are both subjects of the first importance, and in this our nineteenth century civilisation, lamentably common amongst all classes of society. At the outset let us discuss the question, "What is neuralgia?" Our Greek lexicon tells us it means pain in a nerve, but let us take a deeper sounding and search for its pathology.

I admit it is only natural that we should prefer dealing with the irrefutable facts of objective symptoms, but if we cannot easily understand and account for the subjective symptoms a patient may describe in minutest detail to us, must we rest with folded arms and hand down to posterity what seems to us too Protean a labour, and too uncertain a reward?

It has often been demonstrated that a living healthy nerve is continually transmitting currents which are analogous to the electric current, and like it, can deflect the needle of the galvanometer.

These are the vital or natural nerve currents, and they pass in a definite direction, the circumference of the nerve being positive, and the axis negative. Their very existence is a convincing proof that the nerve is living.

What, however, is the function of a nerve? Let us suppose

* Read at the Annual Meeting of the Western Counties Branch held at Stroud, July, 1887.

while the two electrodes of the galvanometer are in contact, the one with the cut surface and the other with the circumference, that the nerve be irritated.

Immediately the needle which previously indicated the positive vital current, now returns to zero, and moves over to the negative side. This is called the negative variation current, and is the only visible evidence of the altered polarity the nerve molecules have undergone.

The irritant may be a mechanical, a chemical, or a thermal one, and it may be applied at a point distal or proximal to the part with which the electrodes are in contact, and the result in each case will be alike the same, providing always that the nerve be living, intact, and not fatigued. If, however, a very powerful irritant be used, fatigue comes on immediately, and the nerve refuses to transmit the nerve variation current until such time as is necessary for it to recuperate its energies by rest and nutriment.

It is also a curious fact that if the nerve be gently clamped while the stimulus is applied, the negative variation refuses to pass the constriction. We thus see that the work of a nerve and the metabolism of its elements are entirely determined by the intensity number, and frequency of negative variation currents transmitted.

One of the duties of a sensory nerve is to transmit messages of pain to the grey matter of the brain. A message of pain is, I take it, the concise way of saying that a negative variation current of a peculiar intensity has arrived at the grey matter of the cortex, and has there altered the polarity or organization of the cells, and moreover, that the consciousness is informed of such molecular changes.

Our experience teaches us that stretching of, or pressure on, a nerve, at a point proximal to the seat of lesion, relieves pain just as clamping a nerve checks the passage of a negative variation current. The painful points which are always associated with a severe neuralgia are probably explained in the following manner, viz., that the current is forced along that part of the nerve which has to pass through some unyielding fascia, or a tunnel in the bone, the resistance at that spot being aggravated by the swelling of the nerve, due to vascular turgescence.

And again, we know from experiments that this current can pass up as well as down a nerve, and have we not seen cases of referred neuralgia travelling centripetally as well as centrifugally?

A patient comes to consult you about a paroxysmal pain

which is felt, say, over the area of skin supplied by the auriculo temporal on one side. You examine the case and diagnose it as one of caries of a lower molar, the pain being a referred neuralgia. You operate and the patient is cured. Why should the pain be felt at a spot remote from the actual and irritating lesion?

Dr. Ross, of Manchester, one of our most reliable neurologists, speaks of the irradiation of the pain from one branch of the fifth to another. And the negative variation current being usually strong in neuralgia, one can understand how it could often overcome the resistance of its insulators and escape down a side branch; but this would only explain some neighbouring neuralgias.

How should we account for disordered vision and hearing—occasional results of trigeminal neuralgia? A sensory impulse travels along the nerve until it reaches the reflex centre, thence it passes through cells and commissures until it reaches the grey matter just beneath the parietal bone of the opposite side. Now if one of these cells through which the impulse passes happens to be connected with another nerve, one can understand a reflected current drifting down such nerve, and causing amblyopia, or blindness if the nerve be ophthalmic, noises in the ear if it be tympanic, pain if it be a purely sensory nerve. And now I shall ask you to consider a third explanation for referred neuralgia. We followed the sensory impulse as far up as the sensorium—the grey matter under the parietal bone. To be more exact I should say that such messages are lodged mainly in the superficial small cells of the grey matter, while the larger and deeper cells of the cortex give origin to axis cylinders which pass down the motor tract in the internal capsule, crusta, medulla and cord.

Thus all the sensory impulses from the half of the body terminate in the superficial cells of an area which is measured by the parietal bone. Special fibrils pass forwards to the præfrontal lobe to inform the consciousness of any serious molecular change that may occur in the sensorium, and also to localise the lesion for the special advantage of the consciousness, should the will decide on adopting any active measures. Is it beyond the range of possibility that these special messengers to the consciousness should fail sometimes in assigning to the irritant its precise locality? Rather is it not remarkable that the consciousness should be so often correctly informed as to the exact seat of the lesion.

On the other hand the theory that all the sensory impulses are

represented on the cortex of the brain, each in a separate cell, is illogical, and pathologically untrue. The skin, undoubtedly is well represented in the sensorium, but the viscera, joints, and internal parts feebly or not at all.

It is thus probable that in the great majority of cases a visceral irritation ascends until it comes to a cell or nucleus, with which some sensory nerve is connected, and that then the current travels up to the cortex, along the sensory nerve track. A truly kind economy of nature! The consciousness is not to blame in attributing the pain to the spot supplied by such sensory nerve.

Irritation of a dental nerve is, I hold, an analogue in point. In a case of disease of the cortex we do not get toothache as a symptom, whereas tingling and numbness of the cutaneous branches of the fifth nerve frequently occur.

Let it be granted, then, that the consciousness is directly or indirectly misinformed. Does a current travel down the nerve to which the pain is referred? And if not, what will explain a localized patch of grey hair in a case of referred neuralgia? Surely a nucleus with which some sensory nerve is connected.

Dr. Gowers points out that by concentrating your whole attention on a certain spot, say, of the head, you become very soon conscious of a definite sensation identical with pain. 'This you can create for yourselves at pleasure. 'The current of thought is evolved from your will to your consciousness. You know you are going to fix your attention on a definite spot. You use those special fibrils that pass between the consciousness and that part of the sensorium which represents the spot on the head. As a matter of fact, the consciousness receives an exaggerated report of the molecular disturbance, and, consequently, attributes pain to that definite spot on the head. Thus we can sensitize our grey matter to such a degree that simple messages are translated into painful ones. For sensory nerves are continually transmitting negative variation currents, but the consciousness takes no heed of them, as they only indicate tactile and other messages of no great importance. But when the whole attention of the mind is fixed upon the one spot on the brain, the normal molecular disturbance is reported to the consciousness in an exaggerated manner.

Can this psychical effort, *per se*, explain a referred neuralgia? or does a real current travel down the aching nerve? Seeing that a current can pass up or down a nerve, we are bound to admit as possible the hypothesis of a painful message descending a sensory nerve, even from the grey cortex itself.

The neuralgia, then, that shoots up one nerve, may arrive at a cell in the cortex that belongs to a remote cutaneous nerve, and then, doubtless, descend as a real current down such sensory track.

In conclusion, the practical question is this—Is it possible to diagnose by the symptoms a case of referred neuralgia from one of primary origin?

We have one good diagnostic point, viz.: that trophic filaments suffer remarkably in cases of referred neuralgia.

A very interesting case, diagnosed by a medical man as advanced phthisis, came under the notice of Mr. Percy Jakins, of London, and was published in last month's *Practitioner*, proving that cerumen in the ear was the cause of the obstinate cough. Here the explanation undoubtedly was that the current travelled up a branch of the fifth to the nucleus in the medulla, where it drifted to the vagus centre and thence to the respiratory tract.

We have seen then that a referred neuralgia may be produced, 1stly, by irradiation; 2ndly, by the arrival of the current at a remote sensory nerve centre in the cortex; and 3rdly, by the misinterpretation of a message correctly represented at the sensorium. I believe that the third cause occurs but seldom, and that the other two, which are commoner events, can be explained on fixed anatomical data.

I therefore propose that subjective symptoms should be recorded in our note books briefly and carefully. And I would also suggest that in our large institutions where observations can readily be made that some such anatomical diagram as this (diagrams of sensory nerve-areas of face and head pointed to) be kept, the acting officer to enter the nature and exact seat of pain in the record book opposite each case of referred neuralgia.

If we resolved to take an active part in this work, not only in our hospital but also in our private practice, we would soon be in possession of statistics, the value of which we cannot over-estimate.

I beg to thank you, Mr. President and gentlemen, for the kindness and patience with which you have listened to my paper.

REPORTS OF SOCIETIES AND OTHER MEETINGS.

General Medical Council.

November 21st.

Mr. MARSHALL, President, in the chair.

DENTAL BUSINESS.

THE following communications were received from the Royal College of Surgeons in Ireland, and from the British Dental Association :—

(a) From the ROYAL COLLEGE OF SURGEONS IN IRELAND:—

Royal College of Surgeons in Ireland,

Dublin, *November 12, 1887.*

DEAR SIR,—I am directed by the President and Council of this College to submit for the consideration of the GENERAL MEDICAL COUNCIL the conduct of Mr. H. F. PARTRIDGE, a former Licentiate in Dentistry of this College, who, having entered into a written undertaking, before his admission to examination for the Licence, “not to seek to attract business by advertising or by any other practice considered by the College to be unbecoming,” persistently violated that undertaking, notwithstanding his being called upon by the College to desist therefrom. I am to remind you that, by reason of this violation of his undertaking and of the Ordinance of the Council referring thereto, the College withdrew his Diploma and required him to surrender same, and notified their having done so to the GENERAL MEDICAL COUNCIL (*Minutes of Dental Committee*, pp. 223 and 225); notwithstanding which, he has since continued to append to his name the letters indicating that he is a Licentiate in Dentistry of the College.

I am directed to submit these facts—of which I am prepared to submit the necessary proofs for information of your COUNCIL—for their consideration, and to request that they will, under authority of Clause 13 of the *Dentists Act*, proceed to “cause enquiry to be made” whether the said H. F. PARTRIDGE has been “guilty of any infamous or disgraceful conduct in a professional respect,” and—if they shall be of opinion that he is so guilty—will “cause his name to be erased from the *Register*” as therein printed.

I am, Sir, yours very truly,

ARCHIBALD H. JACOB, F.R.C.S.I.

Secretary of the Council.

W. J. C. MILLER, Esq.,

REGISTRAR *of the* GENERAL MEDICAL COUNCIL.

(b) From the BRITISH DENTAL ASSOCIATION :

40, Leicester Square,
London, W.C.

November 21, 1887.

I am requested by the Business Committee of the British Dental Association to express to you their earnest hope that the MEDICAL COUNCIL may see their way to the removal of Mr. PARTRIDGE from the *Dentists' Register*.

Whilst they do not presume to offer any suggestion as to the course to be adopted by the COUNCIL, for that is a matter which must rest entirely in their own hands, and although they would greatly regret that the COUNCIL should enter upon any litigation of doubtful issue, on the other hand, they feel that the removal of the name if possible would be in accord with the spirit of the *Dentists Act*.

After careful enquiry, the Committee are of opinion that Mr. PARTRIDGE is not deserving of the smallest consideration beyond his legal rights, and they would further venture to call your attention to the following circular in which he foreshadows the method in which he will endeavour to render nugatory the previous action of the Irish College and of the MEDICAL COUNCIL, and at the same time indicates the manner in which his practice is to be conducted and maintained.

I remain, gentlemen, your obedient servant,

MORTON SMALE, M.R.C.S., L.D.S.,

Hon. Sec. B.D.A.

To the GENERAL MEDICAL COUNCIL.

Mr. MACNAMARA :—What is the object of mentioning this case now? I thought that the matter was to be deferred till Thursday.

The REGISTRAR : The object is to set the Council in motion by some communications. The next step will be for the Council, if it sees fit, to order that the communications be referred to the Dental Committee, who are summoned for to-morrow to consider the case.

Sir W. TURNER : I move that the case of Mr. Partridge be referred to the Dental Committee for inquiry and report.

Mr. MACNAMARA : I second the motion.

Mr. McVAIL : When was this gentleman registered? His name does not appear in the *Dentists' Register* for this year.

The REGISTRAR : His name was removed last year. The Register was printed in January. Since that time, by mandamus from the Queen's Bench, he has been restored to the manuscript

register, but, of course, there has been no time to put it in the printed register.

The motion was agreed to.

Friday, November 25th.

Mr. Marshall, President, in the chair.

The case of Mr. Henry Francis Partridge was dealt with by the Council.

Mr. WHEELHOUSE moved that the report from the Dental Committee in regard to this case be received and entered on the minutes.

Dr. MATTHEWS DUNCAN seconded the motion, which was agreed to.

The REGISTRAR stated that Mr. Henry Francis Partridge had been summoned to appear before the Council on that day at two o'clock, but he did not appear either by himself or by representative.

Mr. FARRER (Solicitor to the Council), said that Mr. Henry Francis Partridge was registered as Licentiate Dental Surgeon, Royal College of Surgeons, Ireland, in 1878, and was placed on the register on the 20th of December in that year. On the 4th of July, 1885, the Council received a letter from the Royal College of Surgeons of Ireland to state that they had withdrawn their licence attached to Mr. Partridge's diploma. A letter dated July 4th, 1885, was addressed by the Secretary and the Council of the Royal College of Surgeons to the Registrar of the General Medical Council, and at a meeting of the Executive Committee on the 10th of July, 1885, the Registrar was instructed to make application to the Royal College for information as to the cause of withdrawal of the diploma. The reply was given that it was for advertising in violation of the undertaking that Mr. Partridge had given to the College that he would not advertise or do any other act which the College thought objectionable. On the 2nd of June, 1886, the Council directed the erasure of Mr. Partridge's qualification, and subsequently, as that was the only reason for his being on the register of qualified practitioners, his name was also directed to be erased therefrom. There was an undoubted power in that Council, under the Medical Act of 1878, to withdraw names from the Medical Register where all the qualifications had been taken away, but, unfortunately, this by some oversight was not repeated

in the Dentists Act. Mr. Partridge subsequently applied for a mandamus to restore him to the register, and this mandamus was granted on the 15th of June last, on the ground that his case had not been decided on *the merits*, the wording of the Dentists Act requiring that the Council should decide on the merits of each particular case. On the 1st of August this position was affirmed on appeal, and here he should like to read a passage from Lord Esher's judgment, than whom no more acute and capable judge was on the bench. He said, after stating what he thought to be the powers of the Council under the Dentists Act: "I should not be satisfied to give this judgment, looking at those powers, if I did not state that in my opinion it is clear that although the mere fact of a person having broken that which he undertook to do with his local authority and having been in consequence struck off their register, does not entitle anybody to strike him off this register without enquiry, yet these facts bring it within the jurisdiction of the General Council, and if they think that this is disgraceful conduct, or if they come to an opinion that what he has done is disgraceful in his professional capacity (and I should say myself that a deliberate and persistent breach of this obligation would be disgraceful conduct upon which they might come to the conclusion that he had been guilty of disgraceful conduct), then after hearing him—I presume the Council are judicial—and after giving him the opportunity of being heard before the Committee of General Council for that breach which they think was done in a disgraceful way, they may erase him from the register." Lord Esher, therefore, not only suggested, but encouraged and almost called upon the Council to consider the case on its merits. In accordance with that view a summons was sent to Mr. Partridge, dated November 3rd, 1887, stating that it had been alleged to the Council that he was liable to have his name erased from the Dentists' Register under and pursuant to Section 13 of the Dentists Act, 1878, on the ground that he had been guilty of disgraceful conduct in a professional respect. The matters alleged against him were that he had constantly and habitually attracted business by advertising and had, therefore, wilfully violated the declaration made and subscribed by him in the year 1878, whereby he declared that he, so long as he held a diploma in dental surgery at the Royal College of Surgeons in Ireland, would not attract business by advertising or any other unbecoming practice. It stated that the facts of the case alleged against him would be ascertained by

a Committee of the General Council appointed under Section 15 of the Dentists Act, which was to meet on the 23rd of November, and invited him to transmit in writing any answer or defence that he might desire to submit or urge in reference to the matters alleged against him, and also to attend before the Committee to establish any facts that he might think fit to submit on the said inquiry. In answer to this, Mr. Partridge replied by a letter of the 18th of November, in which he stated that he was in receipt of Mr. Farrer's communication concerning the meeting of the Committee of the General Medical Council of the 23rd, to discuss the question of removing his name and qualifications from the Dentists' Register on the ground of his having, by systematic advertising, violated his agreement with the Royal College of Surgeons, Ireland, and that, although his health was not very strong, still if his presence was esteemed necessary, he would endeavour to attend out of respect for the Medical Council. With regard to his defence, the lines thereof might be found in previous letters written by him, but he would bring under their notice the following points in explanation of his having violated his undertaking with the Royal College of Surgeons, Ireland. At the time of signing the arbitrary contract imposed upon him, viz., not to advertise, he did not anticipate being visited with blindness, neither did he think that any objection would have been taken to his advertising his institution on precisely the same principles that medical men organize self-supporting homes, &c. He did not consider that what he had done was in any way dishonest advertising. He stated that since his name had been removed from the register he had advertised more extensively, but he should very much like to see the advertisements and the matter thereof which constituted disgraceful advertising, and which caused the Royal College of Surgeons, Ireland, to remove his name from the register. If the system of advertising was to be stopped it should be done *in toto*. He said that he was at a loss to understand the object of the present inquiry, having thought that the question had been finally settled and his obligation fulfilled by his returning the diploma, which he did immediately upon his exact professional position being defined by the decision of the Court in his favour. He had not returned it previously because no precise time was stipulated as to when the diploma was to be cancelled, and he could not see how the Council could have expected him to return it earlier. He further stated that he was not altogether

pleased with the present compilation of the Dentists' Register, the same not being a reliable book of reference and containing the names of many practitioners who advertised and whose names should have been erased as his had been. He added that it was his further conviction that when the judges made the comments they did, they were under the impression that the Dentists' Register contained only the names of those of unspotted respectability, and that all advertisers were rigidly excluded. He deeply regretted having violated his undertaking, but no other course was open to him. Having been in the profession for nearly a quarter of a century, long before the Act of Parliament or the register was ever dreamt of, the opinion to which he was subjected was, he considered, extremely arbitrary, amounting he need not say to persecution. Granting that he had acted wrongly, surely a man of his long standing was not to be visited with so heavy a penalty as total extinction.

Other documents were also laid before the Council by Mr. Partridge, and were read by the Solicitor.

Mr. FARRER then stated that although Mr. Partridge had ridden off on the ground of advertising, it was not a question for the consideration of the Council that he had advertised. What was for their consideration was whether he behaved disgracefully in violating the undertaking which he had given to the Royal College of Surgeons, Ireland. The case was referred by the Medical Council to the Dental Committee to find out the facts. Their report was conclusive on the facts, and he now proposed to read it.

REPORT BY THE DENTAL COMMITTEE ON THE CASE OF HENRY FRANCIS PARTRIDGE.

Members.—The President, Sir Dyce Duckworth, Dr. Quain, Sir William Turner, and Dr. Aquilla Smith.

The Dental Committee having ascertained the facts relating to the case of Mr. Henry Francis Partridge, report as follows :—

1. The name of Henry Francis Partridge, with the qualification of Licentiate Dental Surgeon, Royal College of Surgeons, Ireland, 1878, was placed on the Dentists' Register on December 20th, 1878.
2. He did not claim registration on account of his having been in practice before the passing of the Dentists Act, and cannot now be registered as having been in practice at the passing of that Act.
3. On July 2nd, 1885, the Royal College of Surgeons in Ireland withdrew or cancelled the diploma granted by them to Partridge, and a letter dated July 4th, 1885, notifying that fact, was addressed by the

Secretary of the Council of the Royal College of Surgeons in Ireland to the Registrar of the General Medical Council, and at a meeting of the Executive Committee on July 10th, 1885, it was resolved that the Registrar be directed to make application to the Royal College of Surgeons in Ireland for information as to the cause of withdrawal of the diploma.

4. The President and Council of the Royal College of Surgeons in Ireland withdrew or cancelled the diploma of Mr. Partridge because of his having, in violation of his undertaking given to that College, attracted business by advertising in connection with the Ladies' Dental Institution, South Kensington.

5. At a meeting of the General Medical Council held on June 2nd, 1886, it was decided:

(a) That the qualification of H. F. Partridge be erased from the Dentists' Register.

(b) That the name of the said H. F. Partridge be also erased from the Dentists' Register.

6. The Ordinances of the Royal College of Surgeons in Ireland forbid advertising, and Mr. Partridge, both before his admission to examination for his diploma in dental surgery, and again after passing his examination and before he obtained his diploma, signed a declaration that so long as he held such diploma he would not attract business by advertising or any other practice considered unbecoming by the College, and agreed that his diploma should be cancelled on it being proven that he had done so.

7. Mr. Partridge has broken such pledge by advertising whilst he was still holding the said diploma, and he did so after repeated warnings from the College. And, further, in answer to the first of such warnings, he apologized, and stated that he was willing to comply with the laws of the College.

8. On June 15th, 1887, the High Court of Justice, at the instance of Mr. Partridge, granted a mandamus to the General Medical Council to restore his name to the Register of Dentists.

9. On August 1st, 1887, on appeal by the General Medical Council, such decision was confirmed, and the mandamus directed to issue.

10. The name and qualification of Mr. Partridge have been restored to the Dentists' Register pursuant to such mandamus.

11. Mr. Partridge still continues to advertise.

He would only add one word more. Lord Justice Lopes, in giving judgment in the Court of Appeal, said, "I would only add this, that if, when the case comes before the General Council, they come to the conclusion that he has wilfully and deliberately acted in violation of the undertaking which he gave when he was made a licentiate—I mean, has wilfully and deliberately attracted

business by means of advertisements—I should think they would have very little hesitation in saying that was disgraceful conduct in a professional respect within the words used in section 13.”

A MEMBER OF THE COUNCIL asked whether they were to understand that it was impossible for a man to be on the register without a qualification.

Mr. FARRER said that was a point that had been discussed before, and it was extremely technical. It was argued in this case that once being on the register there was no power to take the name off, that the mere estreating of a qualification did not take the name off the register. In dealing with this case, Lord Justice Lindley said the question raised was one of very great importance, and more particularly was it important to the various authorities described in Section 2 as “Medical authorities,” that was to say, the bodies and universities who chose members of the General Council. He added, “The effect of our decision unquestionably is this, that it renders it incompetent for a medical authority, simply by removing a licentiate from the register, to require him to be removed from the Dentists’ Register, until the Medical Council have come to the conclusion that he ought to be removed under the provisions of Section 13. In other words, the consequence of our decision will be that it will not be competent to the Medical Council, without exercising their jurisdiction and discretion of the powers given to them, to remove a person from the Dentists’ Register simply because the licentiate has been struck off its list by the medical authority which puts him on.” Lord Justice Lindley pointed out the curious anomaly of the case, that Mr. Partridge, at the moment of applying to be registered, had not a qualification which would have entitled him to be put on, but that, owing to the defective way in which the Act of 1878 was drawn, he had the right to come and ask to be registered although he had not the qualification necessary to put him on the register. He said, “It would be a strange thing to say that any gentleman who, not being a licentiate, was not entitled to be registered, should be in a position to maintain that the Medical Council should put him on the register. The answer to that was to be found in the ambiguity of the expression ‘entitled to be registered’ contained in Section 6; but when they came to Section 7, it was plainly confined to persons entitled to be put on that register in the first instance, and not to persons entitled to be kept there when they were on.”

Strangers were then directed to retire, and the Council proceeded to deliberate upon the case.

On the re-admission of strangers, the PRESIDENT stated that the Council had arrived at the following decisions :

"(a) That, in the opinion of the Council, Mr. Henry Francis Partridge has committed the offence charged against him, that is to say, wilfully violated the declaration made and subscribed by him, whereby he declared that as long as he held the Diploma in Dental Surgery of the Royal College of Surgeons of Ireland, he would not attract business by advertising or any other unbecoming practice."

"(b) That the offence is, in the opinion of the Council, disgraceful conduct in a professional respect."

"(c) That the Registrar be directed to erase the name of Henry Francis Partridge from the Dentists' Register."

The Odontological Society of Great Britain.

THE Society's Rooms, in Leicester Square, being still unavailable, owing to the alterations now in progress, the second meeting of the session was held, on the 5th ult., at the Beethoven Rooms, 27, Harley Street, Mr. C. S. TOMES, F.R.S., President, in the chair. There was a full attendance.

The Curator (Mr. Storer Bennett), announced the purchase of five specimens illustrating dental lesions in the lower animals, and seven normal specimens exemplifying points of interest in comparative anatomy. Messrs. E. Lloyd Williams and Vanderpant were chosen auditors.

Mr. J. BLAND SUTTON, F.R.C.S., discussed some cases of congenital fissure of the mouth, illustrating his remarks by some extremely interesting specimens. Mr. Sutton said, Sir William Fergusson stated that hare-lip in the human subject differs from the lip of the hare, in that it is invariably in the middle line in this animal, always lateral in man. Mr. Sutton notices that this statement is too absolute, as, although rarely, hare-lip may be median in the human subject, hare-lip in other mammals (slink calf) is commonly to the right or left of the mesial axis. In a case of median hare-lip in the human infant there was found to be an absence of the ethmovomerine plate, and hence, of the nasal septum and premaxillary bones. Of a litter of pups, bred from a pug-bitch with a cleft in the upper lip and nose, half evinced the same deformity. The cleft was a median vertical split, involving the upper lip, and passing between the nostrils and

incisive bones, and opening on the hard palate. Clefts of the lower lip are very rare, but still, several are on record; of these some involve the lower lip and symphysis. Speaking of *macrostoma*, Mr. Sutton attributes that condition to failure of union, partial or complete, of the mandibular fissure beyond the natural limits of the mouth. Quoting two cases, he found in one an abnormally large mouth, the angles of which gradually passed into a red cicatrix, while the scar ended in a recent gaping wound, through which the dura mater was seen. This condition was symmetrical. The scar-like line probably resembles the linear cicatrix sometimes seen in the line usually followed by a hare-lip. In this specimen no cutaneous processes existed at the spot where the mouth generally ends. In the other case cited a depression was present behind the ear on the right side, as well as a nodular mass of skin, while a white cicatricial line existed within the cheek corresponding to the external depression. On the left cheek a congenital cutaneous nodule existed behind the angle of the mouth. The dimple in the right cheek and the nodule in the left result, the writer believes, from a faulty closure of the mandibular cleft, being comparable to cervical branchial fistulæ, resultant from imperfectly closed branchial clefts. His' investigations in foetal anatomy explain many of the above abnormal conditions. The mouth he shows is, at the fifth week, an opening from which radiate five fissures. The upper pair are the orbito-nasal, the two lower form the mouth; the median fissure separates the jaws. The median process forms the nose, and two rounded prominences (globular processes) appear at each angle. From these the alæ of the nose and intermaxillæ should be formed, and later, they, with the lateral pieces, unite to form the lip. In some mammals, and especially rodents, the globular processes do not unite; in man the fusion is almost constant, but the coalescence with the lateral pieces less certain. Median hare-lip probably arises from non-development of the globular processes. Non-coalescence of the fused globular processes with the lateral bars probably determines lateral hare-lip in the lower animals as in man. Macrostoma is explained as being due to failure of union in the posterior part of the oral cleft, whilst the median cleft in the lower lip occurs when the mandibular bars, from one cause or another, fail to fuse in the mesial line. His' views upon the globular processes would make one expect hare-lip would be associated with a cleft involving only the premaxillæ. A case cited by Mr. Sutton lends colour to this

surmise. A lad of eighteen, afflicted with left-sided hare-lip, showed a fissure half an inch long in the left maxillo-premaxillary suture separating the canine from the lateral incisor. Mr. Sutton exhibited the head of a puppy, the subject of median hare-lip, bred from a bitch which possessed a similar deformity; an embryo marsupial (*macropus*), which showed a median fissure involving the upper lip and premaxillæ, as well as a cleft in its lower lip. Cases were cited in which it was clear that non-union of the globular processes with the lateral bars had resulted in fissured lip and cleft maxillæ in a calf and a lamb; and similar defects arose in man. The median cleft normal in the hare, arose from non-coalescence of the globular processes with each other, and such a condition might arise through defective attempts at development in human infants.

Mr. STORER BENNETT remarked that he remembered seeing in an old Dutch anatomical work, a plate representing a median hare-lip, so that His' observations must have been forestalled by over ten years.

Mr. SUTTON, in replying, said that his specimens of pups, born with cleft palate, of a mother also possessed of that deformity, had peculiar interest, as they proved that pathological aberrations from a type might be propagated by hereditary influence, and hence showed the important part pathological conditions might play in Evolution of species.

Mr. BRUNTON (Leeds), exhibited a specimen of absolutely pure cocaine hydrochlorate, which he had procured from Messrs. Reynolds and Branson, of Leeds. He also explained a perfected matrix and matrix clamp. The clamp was of universal application. The key which fixed the clamp had a removable angular attachment, and allowed of adjustment to any of the teeth. He also exhibited a specimen of Mushat steel, which possessed the merit of being harder than other steel, and was consequently better adapted for dental tools. He also showed the model of the mouth of a boy possessed of six incisors in the temporary set.

Mr. STORER BENNETT exhibited a large odontome, half of which he had obtained from Mr. Jordan Lloyd, of Birmingham. The specimen, before section, measured $1\frac{1}{4}$ in. by $1\frac{1}{8}$ in. by 1 in. It was taken from the jaw of a labourer who had received a blow upon the cheek several years before the growth appeared. The swelling began in the neighbourhood of the second right upper molar, and

increased towards the cheek. In one half of the specimen a fang was distinctly discernible, none in the other.

Dr. ST. GEORGE ELLIOTT showed some most ingenious dental implements; a new handpiece, which could be easily detached from the cable and sheath by moving a slide, and was perfectly firm when attached. He also exhibited two right angles, to go on the cable instead of the handpiece, one with a spring chuck, in which the bur was at once released by pressing with the finger upon a spring opposite the bur.

Dr. Elliott also described a modification of the Rollo Knap blowpipe, consisting of a small and portable instrument; and he demonstrated some useful forms of engine mallets.

Mr. PENFOLD introduced to the society a new antiseptic, the fluosilicate of sodium. Soluble in water, the powder, when damp, is an irritant, and even a vesicant, to the skin. He found it useful, removing the foetor of neglected mouths, especially with artificial dentures. A tablespoonful in a tumbler of water makes a good mouth wash; it is also useful, as a dressing, in alveolar abscess and dental abscess. On the exposed dentine it is highly solvent, and hence is inapplicable as a devitaliser. In pulpless molars it is serviceable to remove the dentine—it may safely be sealed in the cavity two days before excavating. After extraction it is hæmodynamic, and astringent to the gums.

Mr. DENNANT showed an intercepting nitrous oxide gas-bag and stand; its object was to afford an easy and efficient means of equalising the pressure of nitrous oxide gas when the reservoir is situated some distance from the face-piece.

Mr. HOWARD MUMMERY showed the head of a rabbit, in which the upper incisors had been displaced, crossing one another, while on the right side the tooth had entered the palate; the corresponding lower incisor being unopposed had grown upwards and backwards.

Mr. E. LLOYD WILLIAMS read a paper upon "The Pathology of Alveolar Abscess." The writer suggested that the term alveolar abscess should be defined as meaning, a circumscribed collection of purulent material, as one of the results of inflammation of the alveolo-dental periosteum commencing around the root or roots of an individual tooth. *Etiology.*—Alveolar abscess may follow the death of a pulp and the spread of inflammation from the point where the vessels leave the root of the tooth to enter into immediate relation with the dental periosteum. When

the death of the pulp follows exposure to the external air the abscess probably is due to septic infection ; when following traumatism its cause is uncertain. Another variety, so-called idiopathic abscess, may occur, for which neither exposure of pulp nor traumatism are responsible, but may ensue upon retrograde nutritive changes. The pulp being killed by traumatism without access of air, may or may not putrefy, and when putrefaction exists it is due to septic conditions. Analogous purulent collections are found in other tissues of the body without access of air, such as abscesses in bone, where the contained pus is offensive, and in many cases full of infective germs. Were Pasteur's doctrines accepted the putrefactive and fermentative processes would be attributed to the presence of germ organisms ; on the other hand, it is open to us to believe that the bacteria are the result, and not the cause, of these transformations. The blood is capable of circulating germs, certainly when the vitality of the individual is lowered, possibly even when in health. Admitting this, conditions of the body which tend to depreciate vitality might render tissues, *e.g.*, of the pulp, unable to resist the action of these germs. If Mr. Brownlie's statement, that the teeth are not water-tight, be correct, direct germ infection through dental structures might occur as the result of this leakage. Dividing alveolar abscess into acute and chronic, the former variety is stated to consist in intense inflammation and to follow a sharp attack of pulpitis, terminating in the death of the pulp. In such cases inflammation of the alveolo-dental membrane, and adjacent alveolus and gum, and contiguous structures, is present. The abscess generally bursts on the surface of the gum, near the diseased tooth. When it is so evacuated the parts resume their normal condition, but certain cases take on the chronic form. *Chronic alveolar abscess* generally follows the death of a pulp. Its development may be painless. A limited area of inflamed tissue within the socket ultimately breaks down, and the pus burrows through an empty root canal, or sinus, to the gum. Occasionally it passes between the periosteum and the tooth ; in either case it may take considerable time before it reaches the surface, and the abscess is liable to exacerbations. In some instances, upon the removal of the source of irritation, the purulent material may be more or less completely absorbed ; such cases may be termed *residual alveolar abscess*. The *sequelæ* of alveolar abscess may be serious ; thus, necrosis of bone, destruction of the soft tissues, and burrowing of pus into tissues remote from the teeth, may occur.

Pathological phenomena of Alveolar Abscess.—These are best studied in the chronic forms of abscess. The alveolo-dental periosteum, composed of connective tissues, undergoes marked changes during inflammation.

1. Infiltration with leucocytes.

2. *Resolution* may follow. This is uncommon in alveolo-dental membrane, except perhaps after hyperæmia.

3. *Organization* may follow. The infiltrated cells become organized into new tissue; naked-eye examination shows thickening of the membrane, while examination of a section reveals loss of the oblique direction of the fibres, which is replaced by a new fibrous tissue running parallel with the root and its socket; and secondly, that the intensity of the inflammation is confined to the lower third (or apical portion) of the membrane; and thirdly, that although the membrane is variously affected in various degrees, no part escapes inflammatory action. The new tissue presents two varieties: the one, fibrous, consists of dense, closely-packed wavy fibres intermingled with fusiform cells; and the other resembles a loose meshwork of adenoid structure.

Suppuration may follow. Leucocytes accumulate and form pus, causing destruction of the enviroing tissues. The walls of the abscess are composed of thickened tissue, corresponding to the so-called *pyogenic* membrane. The pus may be thin or thick, and usually possesses a phosphatic smell.

Change in Cementum.—Absorption or increase of growth may occur in chronic alveolar abscess; the latter condition we know under the terms *exostosis*, *hyperostosis*, *hypertrophied cementum*, but these terms are all open to objection, and it is proposed that they should be replaced by another, viz., *cementosis*. Absorption and cementosis often occur synchronously. In absorption of the root pus appears to play a minor part. *Absorption facets* are found upon the hard tissue. These contain giant cells as well as smaller cells, some like leucocytes, some larger supported in a fibrous stroma. The fibres run at right angles to the fibrous tissue surrounding the root, i.e., in the *direction of the ordinary cells*. Cementosis follows low inflammation, and may attack teeth apparently healthy. Various local nutritive changes in the alveolo dental membrane give rise to various forms of cementum overgrowth—(1) granular, (2) laminar, (3) lacunar, (4) irregular. Granular deposit occurs on conical molars where the fangs are glued together. The laminar stains deeply and is found upon the roots of teeth which are slightly

inflamed. Lacunar occurs in patches on roots of teeth after tolerably intense inflammation. The irregular variety "suggests the calcification of a jumbled mass."

Changes in the Alveolus.—The bone subjacent to the inflamed periosteum becomes absorbed, and even may be necrosed should the blood supply be cut off by the pressure of granulation tissue.

Changes in Dentine.—The translucent appearance noted in the dentine of roots of teeth in old people is variously ascribed to the result of vital or non-vital action. Mr. Lloyd Williams cannot account "for the transparent belt of dentine in fangs" involved in periosteal inflammation without assuming low inflammatory action. A large number of sections appear to show a distinct increase of medullary tissue in the shape of enlarged tubes and their contents. The transparent belt, moreover, may undergo calcification. And further, since new living material cannot be deposited upon dead tissue, it is impossible to believe that dentine dies when the pulp of a tooth is killed, since a distinct deposition of cementum does take place to repair absorbed patches of dentine in pulpless teeth.

In the discussion which followed, Mr. NEWLAND PEDLEY demurred to the definition adopted by Mr. Lloyd Williams. After speaking of various views held concerning the pathogenesis of septicæmia, he drew attention to the fact that putrid discharges need not determine inflammation. Germs probably were able to penetrate tissues, and in this way would obtain access to the pulp cavity.

The PRESIDENT having expressed a hope that Mr. Lloyd Williams would prosecute his research further, and having thanked the givers of casual communications, the next meeting was announced for Monday, January the 9th, 1888, at 8 p.m.; Business: the President's valedictory address; a paper by Mr. A. S. Underwood, upon "Erosion in connection with some points in the minute Anatomy of Enamel;" a short paper by Mr. J. S. Hutchinson, "A Note on Erosion;" and the election of the society's officers.

London Dental Hospital Students' Society.

THE ordinary general meeting of the Student's Society of the Dental Hospital of London, was held on November 14th, 1887. H. Lloyd Williams, Esq., Vice-President, in the chair. The

minutes of the previous meeting having been read and confirmed, the following gentlemen were proposed for membership : Messrs. J. Turner, Irwin Street, A. W. W. Hoffman, S. C. Bright, R. W. Dickinson, H. Welham, J. B. Hordern, G. N. Moseley, H. G. Harper, H. Pedler, E. J. Appleton, F. E. Davar, A. V. Knowles, E. Preedy, and T. H. Day. The following gentlemen were then balloted for, and elected members of the Society :—Messrs. J. Dunlop, F. Burton, G. G. Spray, A. B. Dalby, and F. V. Richardson. Messrs. D. A. Cormack, J. Norris, I. Cohen, E. Parsons, E. L. Eskell, and A. Black signed the Obligation Book, and were formally admitted to membership by the Chairman. On Casual Communications being called, Mr. Seymour presented to the Society models of a case of greatly overshot-bite. Mr. H. Williams presented a first upper molar which was unique, in possessing a large pulp stone, having two distinct canals in both the anterior buccal, and palatal fangs. Mr. Preedy presented an upper wisdom, possessing five fangs, and exhibiting a small nodule of enamel attached at the neck of the tooth. Mr. H. Lloyd Williams mentioned a case of an upper six-year-old molar in which there was a distinct grooving of the palatal fang, which he said most probably possessed two canals. Mr. Bates then read a very interesting paper on "Cleft Palate," which was followed by a discussion in which Messrs. Badcock, Dolamore, Lloyd Williams and others took part. A vote of thanks to Mr. Bates having been passed, the chairman announced that the next meeting would take place on Monday, December 12th, when Mr. Constant would read a paper entitled "The Dentist of the Future."

Birmingham Dental Hospital.

THE annual meeting of the Birmingham Dental Hospital was held yesterday at the Council House. The Mayor (Mr. M. Pollack) presided ; and there were also present Colonel Phelps, Dr. Green, Dr. Simon, Dr. D. Vinrace, Councillor Brinsley, and Messrs. E. M. Pearson, J. Ansell, H. B. Neale, Adams Parker, K. Wilson, C. Sims, E. F. Booth, G. H. Payton, and W. A. Addin-sell (Hon. Secretary). Mr. J. H. Chance wrote expressing regret at his inability to be present.

The HON. SECRETARY read the report of the committee. They congratulated the governors upon the fact that the hospital had continued to grow in popularity, and each year relief was given to

a larger number of patients. The number of cases treated during the year ended July 31, 1887, was 12,133, as compared with 10,704 in the previous twelve months. The operations performed numbered 43,415, against 11,037 last year. Although during the last five years the patients had doubled in numbers, the means of support had increased very little. The subscription list for the past year actually showed a decrease. The greatest economy had been observed, and the average expenditure of the cases treated was only 6.4d. With a view to increasing the income, the committee had decided to adopt the system of registration, the fee being sixpence for each patient over ten years of age, children being admitted free. The committee were sanguine that this step would in no way impair the usefulness of the institution, but would enable it to carry on its work even more efficiently than in the past. In conclusion, the committee deeply regretted the death of Mr. E. H. Carter, and the resignation of Mr. E. M. Pearson from the office of treasurer.

Mr. PEARSON presented the statement of accounts, from which it appeared the liabilities exceeded the available income by £83.

The MAYOR, in moving the adoption of the report and statement of accounts, said it was one of the agreeable privileges attending the mayoralty to be associated with the charitable institutions of the town. It was pleasing to find that the Dental Hospital was so popular. The increase between last year and this in the cases treated was 1,429, or nearly 15 per cent. But the importance of the work might best be judged by comparing this year's returns with those of 1883—the former more than doubling the latter. Unfortunately the subscriptions were £20 less, and the donations £75 less. He trusted that the registration system would not militate against the work of the hospital, but rather that it would assist in instituting seven instead of four filling chairs. The institution ought to receive more attention and support from the public.

The resolution was seconded and agreed to.

Votes of thanks were passed to the hospital staff and to the officers. The Mayor was appointed president, the Hon. A. C. G. Calthorpe, vice-president, Mr. Wilson, hon. treasurer, Mr. Addin-sell, hon. secretary, and Mr. C. Sims, in recognition of his past services, was elected consulting dental surgeon.

On the motion of Mr. TURNER, a vote of thanks was accorded to the Mayor, and the proceedings terminated.

PRESENTATION TO MR. C. SIMS.

At the Birmingham Dental Hospital, November 10th, a meeting was held of the friends, pupils, and colleagues of Mr. Charles Sims, L.D.S.R.C.S.Eng., for the purpose of presenting him with a testimonial, consisting of a purse of gold and a handsome illuminated address, as a recognition of the faithful and valuable services which he has rendered, during a period of 17 years, to the Dental Hospital and School, from the staff of which he is retiring. There was a large and representative attendance of dentists from the Midland counties. Letters were read from Sir Edwin Saunders, Sir John Tomes, Sir Thomas Martineau, and Mr. J. S. Chance, Chairman of the Hospital Committee, all of whom expressed cordial approval of the object of the meeting.

Mr. B. NEALE, as Mr. Sims's senior colleague, made the presentation, and expressed the great pleasure it afforded Mr. Sims's colleagues to recognise his services, not only in connection with the Dental Hospital and School, but also on behalf of the dental profession generally. He had laboured assiduously in the cause of dental reform, and they hoped to see him spared for many years of active work.

Mr. SIMS, in responding, expressed his gratitude for the kindness and good wishes which had been expressed towards him.

The address was worded as follows :—"To Charles Sims, Esq., Licentiate in Dental Surgery of the Royal College of Surgeons, England.—Dear Sir—We, the undersigned, your colleagues, pupils, and friends, on the occasion of your retirement from the staff of the Birmingham Dental Hospital, desire to record our cordial appreciation of your valuable services during the past seventeen years. You were one of the most active promoters of the Birmingham Dental School, the formation of which was largely due to your strenuous exertions. We desire likewise to record your untiring zeal in the cause of dental reform, you having been an active member of the Dental Reform Committee, which ensured the passing of the Dental Act of 1878, to which you devoted both time and money. Whilst testifying to your numerous and energetic labours in the past, we sincerely hope that your connection with the profession which owes you so much may still extend over many prosperous years. With best wishes, we are, dear Sir, yours faithfully, W. A. Addinsell, Clifford Balten, F. Bullin, H. Cartwright, F. C. Cave, T. Chance, R. L. Chance, W. C. Clarke, J. S. Crapper, T. M. Flewitt, W. Flewitt, W. H. Gent, F. Goffe,

H. N. Grove, F. Harding, E. Jaques, Furneaux Jordan, Roff King, T. C. S. Kynnersley, H. Levason, Joseph Lewis, Mrs. Marigold, Sir Thomas Martineau, Bennett May, R. Owen, W. Palethorpe, A. Parker, E. M. Pearson, F. W. Richards, W. R. Roberts, Sir Edwin Saunders, Richard Shelton, Gilbert Smith, Lawson Tait, Sir John Tomes, Smith Turner, Dennis Vinrace, W. T. Waite, Mrs. Yates, A. Brown, F. Brown, J. G. Payne, H. S. Gent, J. Meacham, Breward Neale, Chairman; F. E. Huxley, Treasurer; John Humphreys, Hon. Secretary.—Birmingham, November, 1887."

The Annual Dinner of the National Dental Hospital and College.

THE Annual Dinner of the past and present students and friends of the above institution was held at the Holborn Restaurant on the 25th November. Mr. C. S. Tomes, F.R.S., in the chair. About eighty gentlemen were present.

The Royal toasts having been duly honoured, Dr. Maughan proposed "the Dental Societies." He said that the value of work depended upon organisation, and the Dental Societies were well organised. The Odontological was the oldest of these societies, and he congratulated the meeting on securing the president of that society for their chairman. The Odonto-chirurgical Society of Scotland followed on the same lines with equal success. The British Dental Association ably discharged its duties as the political representative of the profession. In addition to these there were active societies in Sheffield, Birmingham, and Brighton; these local societies were a sign of the times, they were united in a desire to enlarge the scope of the intellect. Society based upon instinct was non-progressive, but based upon intellect it was progressive. These societies furthered the cultivation of useful debate and promoted social intercourse, and by such means the spirit of rivalry and jealousy was stamped out. He coupled the toast with the names of Mr. Weiss, Mr. Hepburn and Mr. Turner.

Mr. FELIX WEISS, in responding, thanked them for their kind reception of the toast. Speaking on behalf of the Odontological Society, he had only pleasant things to say. He had been for fifteen years behind the scenes, and knew how intent the council had always been upon keeping up the standard of literary work. He urged his younger hearers to enrol themselves as members of the Association and of the Odontological Society, and not to rest content with being passive, but to become active members.

Mr. DAVID HEPBURN, replying for the Odonto-chirurgical Society,

said that perhaps he had been chosen to respond for that society because so few of its members were present, and this fact might point a moral that the northern society deserved that more of them should link themselves with their brothers on the other side. The two societies were modelled upon the same plan, and their friendly rivalry was a gain to both. He was sure his northern friends would be glad to hear of the kindly reception their toast had met with.

Mr. TURNER, replying for the Association, said he regarded the society as unique, and the first of its kind established here or elsewhere. They had had experience to guide them, for they adopted for their model the British Medical Association. That Association they knew had prospered wonderfully during the last twenty years, and they hoped that their society would also prosper in the same way. Their Association was governed by a Representative Board, the Representative Board elected a Business Committee, the Business Committee transacted all the business of the Association between the meetings of the Board. Sometimes the Committee had been blamed for not doing enough, sometimes it had been blamed for doing too much ; for his own part he thought they should console themselves with the words of a Book none studied too much, "Woe be unto you when all men speak well of you." As some thought that they did too much and some that they did too little, they might fairly and justly conclude that they hit the happy medium and just did enough. The Association did not want to be continually walking in procession and proclaiming its merits ; it worked quietly but none the less effectively. He might tell them that the name of Mr. Partridge, who had already attracted some attention, was no longer to be found on the Dental Register. It had, by the efforts of the British Dental Association, been that day erased from the Register. The Representative Board was composed of representatives from the Provinces and members residing in London, and the number of the Provincial members were in excess of the London members by nine or ten, which he thought a very good majority. He mentioned this to show them that the Association was essentially a Provincial Association. Only twice in the course of ten years had the President been a London man. The Branches were, the Midland, Central, Western Counties, Eastern Counties, and the Southern Counties, the West of Scotland, the Scottish and the Irish ; so they would see they had Branches all over the country. Well, it was those Branches and their office-bearers who kept the objects of the Association before the public ; the London men had little to do with it except the drudgery. At their annual meetings it was the Provincial men who were the prominent figures, the London men were not heard of except when the Treasurer or Secretary presented his report, therefore it was essentially a Provincial Association, and he would urge them that they ought to join it if for nothing else but to keep up the touch between London and Provincial men. The Representative

Board had three officers who must necessarily, they thought, reside in London. There was a fourth, who did not necessarily reside in London, but at their last meeting they had by a large majority elected a gentleman, a London man, elected not because he was a London man but because he was an honour to their Association ; a gentleman who was a dental reformer before dental reform was thought of, he meant Mr. Felix Weiss. He had known him now for thirty years, and he had always known him actively on the alert in the interests of the profession ; if not finding fault he was doing something else equally useful, and he thought the Association did well to elect him for a term of three years as their Vice-President. Concluding by cordially endorsing Mr. Weiss's recommendation to them to become members of the Association, he begged to thank them for the manner in which they had received the toast.

Mr. J. E. SPENCER, M.P., in proposing "the Staff," said that a hospital could no more get on without a staff, than a boat could without a crew. A proper *esprit de corps* was necessary, and then with "a long pull, and a strong pull, and a pull altogether," success was certain. He had read with interest and pleasure Mr. Cunningham's pamphlet on "Dentistry in its Relation to the State," and he had witnessed Mr. Cunningham's energy in the lobby of the house, and enlisting sympathy in the cause, and consequently he had great pleasure in coupling that gentleman's name with the toast.

Mr. GEORGE CUNNINGHAM, in reply, alluded to the help that had been afforded him by the last speaker in ventilating his views. His object, as a lecturer, had been to render his lectures serviceable for advanced, as well as for junior, students. He hoped the students would remember that their future status depended largely upon their own exertions.

Mr. JAMES STOCKEN, in proposing "The Medical and Dental Schools," compared the position and advantages of the present students, with those of his own student days, twenty or thirty years previously, specially comparing the meagre dental literature of the past with the redundancy of the present, a deluge which it was difficult for a busy man to wrestle with. He also referred to the spirit of fraternity which happily now existed, but was unknown in his early days. Having briefly touched upon the subject of the admission of ladies as students at the National Dental Hospital, a subject which he thought it was not in place to discuss upon that occasion, further than to say that he believed the spirit which prompted the action which the hospital had taken was a spirit of extreme liberality, he concluded by proposing "The Medical and Dental Schools," coupled with the names of Dr. Norton and Mr. Arthur Underwood.

Dr. NORTON briefly replied on behalf of the medical schools.

Mr. ARTHUR UNDERWOOD, in replying for the dental schools, said he thought the most interesting feature to be noticed during the time

he had been acquainted with them, was their rapid growth and the demands upon them. He touched upon the question of the examinations, and said if the practitioner now was a very different being from the practitioner of former days, the examinations, too, were very different. He thought the present L.D.S. examination as severe a test of capability as that of any of the other professions; and he regarded the dentist who held the L.D.S. diploma as a thoroughly capable man. The flooding the country with qualified men, however, would be an awkward matter but for one other thing, and that was the growth of public opinion. The public were now beginning to distinguish between the sheep and the goats. It was in this way, and not by the enforcement of the penal clauses of Acts of Parliament, he thought, that quackery would die a natural death. These schools would show the public who the right men were, and then they would not need to have recourse to penal legislation to protect them. Mr. Turner had alluded to the fact that their Association was largely recruited from the provinces; that it was in fact to a great extent a provincial Association. It had also been said that it was to the provinces that they must look for any considerable increase in their numbers in the future. He preferred to put it in another way. He thought that it was to the students they must look for their increase, and he hoped the students would lay that to heart. It was from the younger generation they must receive their verdict of success or failure, and for his part he had no fear of what the verdict would be.

The CHAIRMAN, in proposing "the Past and Present Students," referred to the fact that much of what he had intended to say had been said already, and that one subject had been interdicted by Mr. Stocken, namely, the admission of ladies to the hospital. Under these circumstances he would take his text rather from what had been said than from what he had intended to say. He regarded these gatherings as equally important with the more formal meetings of the learned societies; the social meetings tended to remove professional jealousies. It became a difficult matter to hate a man if you knew him and had found out his good qualities. On the other hand, if you knew him and found that he was not a good fellow, you could hate him with the better grace. He felt himself to be more intimately connected with their friendly rival, the Dental Hospital of London, than with their own school in some respects, but as president of the Odontological Society and as a member of the Board of Examiners of the College of Surgeons, he was in as close connection with one school as with the other. As an examiner then, he begged them to regard examiners as their best friends, friends in disguise perhaps for the moment, but still their best friends. Examinations were a wholesome stimulus to work; the student is the father of the man and bad students seldom became good practitioners. There was a widespread

idea that men were often rejected for failure in some particular subject ; he had never in his experience met with such a case ; the general result had always been taken into account ; it was therefore possible for any student, by careful work, to make the result of his examination a certainty. In reference to the connection with the College of Surgeons he proceeded to say : The great advantage which I conceive we have in being associated for examination purposes with an ancient corporation having very wide-reaching powers like the Royal College of Surgeons, is, that we have no knowledge whom we are examining. It would be intensely disagreeable to be an examiner on behalf of a body composed mostly of one's own profession, a great number of the examined being friends and acquaintances, the sons of friends, pupils, and so forth, people who in many instances we knew and respected, it would be very much more disagreeable if the power of examination were only in our own body. But when we are asked to examine men whose names we never know, of whom we know nothing more than their number, then we are placed in a position of more pleasing independence ; that is, only an examiner's point of view.

Then the present students of the school have been associated in a new departure by having two lady medical students. I would only say that ladies who have taken up the subject of medicine have overcome all sorts of obstacles and opposition ; they have stormed the hospitals, have been eager to be called "persons," and where "person" has been objected to, they have stoutly maintained they were men. They can now be examined by the Colleges in Edinburgh, in Ireland, and at London University. So far they have not obtained the right to examination by the College of Surgeons or the College of Physicians in England, but if they make a vigorous effort I should not wonder if, after the manner of ladies, they get their way. I may congratulate you on having been the first to open your doors to the ladies. At this hour of the evening I will not keep you any longer ; as I said before, when all present are students, no great inducement is needed to make them drink their own healths. I give you the toast of the Past and Present Students, coupled with the names of Mr. F. Rose and Mr. Lankester.

Mr. F. ROSE, of Liverpool, replying for the past students, called attention to the large amount of work done for students by their chairman, Mr. Charles Tomes, in the department of literature. He announced, amid much applause, that a successful endeavour had been made to place the dental school of Liverpool on a level of prosperity and efficiency with its sister school at Manchester.

Mr. LANKESTER having replied in appropriate terms for the present students,

Mr. FELIX WEISS proposed the health of the Secretary, Mr. Klugh. Mr. KLUGH, in reply, alluded to the growth of the hospital, and

stated that in the last ten years they had raised their number of patients from 8,000 to 35,000. He also announced that a very good site in Great Portland Street had been selected for a new hospital.

The DEAN (Mr. Gaddes) then proposed "the Chairman." He alluded to the fact that they had most of their knowledge of dental anatomy through Mr. Tomes, and congratulated them upon having obtained him for their chairman that night.

Mr. TOMES briefly responded and proposed "the Dean."

Mr. GADDES having replied, a very pleasant and successful evening was brought to a close.

Throughout the evening a very excellent selection of vocal music was performed by members of the hospital and their friends.

Annual Dinner of the Staff and Past and Present Students of the Dental Hospital of London.

THE Annual Dinner of the staff, students, and friends of the Dental Hospital and School of Dental Surgery of London was held this year on December 3rd in the Venetian Saloon at the Holborn Restaurant. Mr. George Gregson, the Senior Medical Officer, occupied the chair, and the gathering was the best attended we have yet had to record, over 150 gentlemen being present. The Chairman was supported by Sir Edwin Saunders, Messrs. Sibley (Chairman of the Committee of Management), Robert Hepburn, T. Underwood, Dr. Julius Pollock, Dr. A. Pearce Gould, Samuel Cartwright, Smith Turner, the Rev. T. F. K. Underwood, and others.

The musical programme, which had been arranged by Mr. David Hepburn, was as good as ever, and Mr. James Shaw conducted and accompanied with perfect taste and precision.

After an excellent dinner the usual loyal toasts were given from the chair.

The CHAIRMAN then proposed the "Army, Navy, and Reserve Forces," Lieutenant BRADSHAW replying, in the absence of Mr. Rogers, of Cheltenham.

The CHAIRMAN, who was very cordially received, then proposed the Past and Present Students. He said:—In rising to propose the toast of "the Past and Present Students," which at this our annual banquet we have always considered the toast of the evening, one cannot see this large assemblage without feeling that our students, although located in distant parts of the country (I may say the world), still retain warm feelings towards their *alma mater*. Without narrating the entire history of our Hospital and School of Dental Surgery, I should like to say one word with regard to its foundation nearly thirty years ago. Whom do we find as the original staff of our hospital and school? I am sure, gentlemen, you will be gratified when I recall

such names as Sir John Tomes, Mr. S. Cartwright, Mr. G. A. Ibbetson, Mr. R. Hepburn, T. Underwood, and Charles Rogers ; and to know that many of these gentlemen are here present to-night, and all of them, without exception, have the interests of our past and present students still warmly at heart. We trust our students will never forget how much we are all indebted to our great parent, the Odontological Society of Great Britain, which was the originator of the first steps of that unceasing progress which our profession has made of late years. The toast of the Past and Present Students opens up an endless theme. I must only briefly touch upon those institutions in which our students already play, or have to play, an important part. The Dental Students' Society does excellent work amongst the present students, and with regard to the British Dental Association, it behoves all to become associated with it, for it is an institution which demands the hearty support of every member of the profession to which we all belong. Both past and present students have reason to congratulate themselves that they are associated with the Royal College of Surgeons, by which connection our specialty has become a now fully recognised branch of the great medical profession, and therein lies its strength. In conclusion, I would only say that it is our students we look to as the *future* supporters of all those institutions which have been formed to uphold the character and advance the interests of our profession. Gentlemen, let us cordially unite in drinking the health of the past and present students of the Dental Hospital of London, and with this toast I have much pleasure in coupling the names of Mr. E. Bartlett, a worthy representative of our past students, and Mr. Badcock, our last distinguished Saunders scholar.

Mr. E. BARTLETT having replied for the past, and Mr. J. H. BADCOCK for the present, students,

The toast of "The London School of Dental Surgery and Lecturers" was proposed by Sir EDWIN SAUNDERS, who said : Mr. Chairman and Gentlemen,—The toast which it is my privilege to propose is one for which it is safe to anticipate a cordial and enthusiastic acceptance. It is the Dental Hospital of London and its Staff, and in this large gathering of past and present students, whose presence at this festival may be regarded as a proof of the deep interest they feel in all that concerns its welfare, I think we may discern good grounds for such anticipation. For many of those whom we gladly welcome here to-day have come from great distances, and at some, not inconsiderable, personal sacrifice ; and I cannot but think, Sir, that it is a matter of congratulation that, thanks to the unanimity and good understanding which have always prevailed, and, it is to be hoped, will always continue to prevail, among the various sections of our professional organisation, the time of this festival should be made to coincide with the meeting of the Odontological Society and of the Association. If then I am asked the reason why I anticipate a good reception for this

toast, I would answer because we all acknowledge the force of the truism that there is no attachment so strong or so lasting as that which we feel for the institution or the person from whom we receive useful knowledge—that knowledge which to the earnest student is as a new birth, a birth of the intellect ; that knowledge which is to fit us for our chosen career in life, that knowledge by which we are enabled to render useful service to our fellow men, and in return for which we hope and expect to receive our legitimate guerdon, honourable competence and a corresponding place in social estimation. May these, not unreasonable expectations, be realised in the life experience of the past and present students of the Dental Hospital of London. It might seem to be a work of supererogation in reference to our hospital to point out its unique advantages of site and structure, were it not that we are prone to undervalue that with which we have long been familiar. It is not very long since, and while it still seemed possible that we might be sacrificed to some contemplated street improvement, that a well-informed and intelligent member of the profession said to me that he supposed in such event we were not particularly wedded to Leicester Square. When, however, I reminded him of our extended frontage, wide open space, uniform light in summer and winter, due to our northern aspect, our accessibility from all parts of London, and our comparative quiet, he frankly admitted, with conviction that such a combination of advantageous conditions, it would be indeed difficult to find elsewhere. But while fully appreciating these advantages of situation, we were not blind to certain structural defects, notably the want of a good lecture theatre for the students, and a larger waiting-room for patients ; and when from the large increase in number of the former and the already crowded condition of the latter, the efficiency of the school and hospital alike seemed to be imperilled, it became evident that the serious consideration of the subject would no longer admit of delay. And now, thanks to the energetic action of your Dean, Mr. Hutchinson, and some other determined spirits, members of the staff, backed by such liberal donations as that of the Medical Committee of £1,000, and of Messrs. Ash of £500, besides numerous smaller amounts, due to the persistent efforts of our indefatigable Secretary, not only have the required extensions been undertaken, but space has been provided by a corresponding enlargement of the stopping-room for some ten or twelve additional operating chairs. But my toast consists of two parts, the hospital and its staff, and I have left myself no space to speak of the latter. But it is needless : for are they not well known to this company and recognised as the worthy successors to that noble band already alluded to by our Chairman ; who were the pioneers in this philanthropic work, and amongst whom the names of Tomes, Cartwright, Rogers, Ibbetson, Underwood, Hepburn, and Turner will always be held in affectionate remembrance. Gentlemen, the toast is, the Dental Hospital of London and its Staff.

Mr. ROBERT H. WOODHOUSE, in replying, called attention to the necessity for those who had the interests of the hospital at heart investigating their banking books to see whether the balance did not warrant them in contributing towards the extensive improvements now in progress. He alluded to the advances in hospital teaching, which had been and still were taking place, and spoke of the condition of things in this respect that he had lately witnessed in America during his visit to the International Medical Congress, held this year at Washington. He spoke of the desire he, in common with all his colleagues, entertained to elevate the style of instruction at the Dental Hospital of London.

Mr. J. SMITH TURNER, in rising to propose the London School of Dental Surgery, was received with prolonged applause. He said that most of them were indebted to dentistry not only for the good dinner they had enjoyed but also for the power to enjoy it and the means to get it. He said the School of Dental Surgery existed in order to provide assistance for the poor who could not obtain it except by charity, and also in order to provide the student with the means of following out the curriculum demanded by the Royal College of Surgeons. The same men whose names had already been alluded to, and so enthusiastically received, and who had founded the organisation of the profession to which they belonged, had resolved to make the instruction of the dental student compulsory. They had pointed out to the proper authorities that a large number of men were voluntarily qualifying themselves to pursue the dental profession, and that it was a right and proper course to render such instruction compulsory, and that much advantage would thereby result to the general public. He explained that much of the prosperity of the school was due to the Committee of Management. They were fortunate in possessing a committee, the members of which were so fully alive to their responsibilities, and a Chairman whose tact and ability left nothing to be desired. He spoke of the system of teaching, and reminded the teachers and lecturers that though great strides had been made there was yet much to be accomplished, and that the future improvement lay in their hands.

The DEAN (Mr. Morton Smale), in replying for the School, called attention to the well-known names that had in past times adorned the staff. Speaking of the prospective improvement in the buildings of the hospital, he told a story of John Bright, who, in reference to an appeal for charity for a poor woman, replied, "I sympathise with her five pounds how much do you sympathise with her." The medical staff had contributed a thousand pounds towards the necessary funds, in fact they sympathised with the charity a thousand pounds, how much did the rest of the company sympathise with it? Speaking of the school he said he thought it was a sign of a good school if it possessed a good athletic club. The Dental School possessed a very good one, and from that he augured well for its work in other directions.

Mr. HUTCHINSON proposed "the Visitors." He congratulated them upon the presence among them of the Dean of the other Dental School in Portland Road, Mr. Gaddes, and coupled the toast with the names of Dr. Julius Pollock, of Charing Cross, and Dr. A. Pearce Gould, of Middlesex.

Dr. POLLOCK (Senior Physician to Charing Cross Hospital), in responding, called attention to the fact that at Charing Cross they too were enlarging their premises. He was not sure that the Dental Hospital was not to blame for this, not only because of the example they had set them, but also because of the increasing influx of students from Leicester Square. This influx he modestly attributed not to any special excellence in the teaching of his own school but rather to the proximity of the two institutions, which rendered mutually convenient arrangements possible and practicable.

Dr. PEARCE GOULD (Dean of Middlesex Hospital) spoke of the excellence of the dental students as he saw them at Middlesex. They not unfrequently carried off the prizes at the general school, notwithstanding the many extra duties of a special kind which they had to perform. He also mentioned the fact that it was compulsory on all candidates for prizes that they should have held a dental dressership.

Mr. THOMAS UNDERWOOD proposed the Chairman. He spoke of his services in the cause of dental education and dental reform, and said he was typical of what the upright practitioner should be. He referred to the formation of the hospital, and how little in those early days they had looked forward to such gatherings as the present. Mr. Gregson had all his life been an unostentatious promoter of the welfare of the profession.

The toast was received with musical honours, and the Chairman, after briefly responding, proposed the health of Mr. David Hepburn, and thanked him for his unselfish energy in organising the dinner.

Mr. HEPBURN, in replying, referred in kind terms to the assistance he had received from his medical friends, and also from the Dean and the House Surgeon, Mr. Williams.

After a few words from Mr. Williams, a very pleasant and successful evening was brought to a close.

APPOINTMENTS.

C. H. COOPER, L.D.S.Eng., has been appointed Hon. Dental Surgeon to the Bradford Children's Hospital.

ASHLEY GIBBINGS, M.R.C.S., L.D.S.Eng., has been appointed to the professorship of Dental Surgery at King's College Hospital which had become vacant owing to the resignation of S. Hamilton Cartwright, M.R.C.S.Eng.

J. MAUDSLEY HOWKINS has been re-elected Hon. Dental Surgeon to the Hospital, St. Peter Port, Guernsey.

MINOR NOTICES AND CRITICAL ABSTRACTS.

A Gem from the American Congress.

Pettsburg, Sept 5th, 1887.

To the International Medical Conference, assembled at Washington
City, D.C.U.S.

WE have a case of Inveterate Neuralgia, which we think will command the consideration of your conference. The subject is a married lady, having borne and reared six children, the youngest now twenty-four years of age. The mother is sixty years of age; and for seven months past, her suffering has been of the most acute neuralgic type. Nothing mysterious, or obscure can be said of the pathology of this case; as the tract of lesion is plainly marked, and the consequent suffering traceable upon the pneumogastric nerve on eighth pair of the right side, involving the sympathetic system therewith.

At recurring intervals, the very origin of this pair at the *corpus olivarie* becomes the seat of pain—relaxing its hold there moves down the *juglar fossa* with intense severity; by the hypoglossal and pharyngeal branches the tongue and pharynx are held in partial paralysis, and deglutition and swallowing are rendered both difficult and painful. Descending its tract, the pulmonary branches carry the pain with constriction to the lungs, and respiration is quickened from 18 to 60 per minute. And likewise the cardiac plexus while under attack renders pulsation of the heart exceedingly abnormal and deathly painful. The œsophageal and gastric flexus being the seat of attack, the most intense agony pervades the entire gastric system; and which, by reason of the sympathetic system, involves the sexual organs in similar distress. No uterine, hepatic, or gastric tumefactions, or other organic lesions are perceptible.

What makes the case worthy of your conference is the uncontrollable and insubordinate nature of its hold upon the nerve tract above mentioned, and from which the pain seldom, if ever, changes its course or abates its agony.

The therapeutics of the U. S. Pharmacœpia fails to supply us a remedy, as will be seen by the failure of the most powerful nerve sedatives used. *Morphia* in all its forms and combinations, *aconiti*, *belladonna*, *chloral hydrate*, in all their reasonable associations, internally administered, have failed in affording relief beyond a mere degree of palliation. Chloroform and collodion paints over

the nerve tract. Liniments, the most intense rubificants and sedative nature fail to accomplish more than temporary relief. In the absence of pain in the hypocondrium the stomach receives food with natural comfort, the uterine and alimentary excretions, together with their normal functions, seem unimpaired and of reasonable becoming senile health.

Possibly in this great assemblage of physicians a like case has been met and successfully treated with remedies differing from the above mentioned, or in combination, and if so the writer and physician in the above case, although partially defined, would be happy and exceedingly favoured if this paper is read before your Conference, and the deliberations of your distinguished body be given to the profession at large. As these nerve disorders are the most formidable and unassailable *Giberalters* of our continent, the International Conference will have accomplished more than the taking of a great citadel, if by your conference the aggregation of experience and the best formulas of so large a body should develop certain and reliable nerve specifics. With profound thanks and sincerity, any suggestions that will alleviate the suffering of this above described and highly respected patient will be duly acknowledged.

Very respectfully yours,

S. E. G.

NEW INVENTION.

Messrs. Swifts' new Oil Immersion, $\frac{1}{12}$

MESSRS. SWIFT, of Tottenham Court Road, have recently produced an Oil Immersion, $\frac{1}{12}$ objective, which they are able to offer to the public at the excessively low price of £5 5s. The specimen which we have examined is one of the best working lenses we have yet seen. The definition is beautifully sharp, and after testing it with the podura scale and some special diatomaceæ against some of the most expensive and most perfect lenses that exist, we can safely say that this lense will take a great deal of beating. The makers have not aimed at producing a very high angle, but for our histological work this is not required. In speaking in such unqualified terms of praise of this lens, we cannot of course say that all the lenses made on the same lines will be equally good ; in reproducing a work of art, and a lens is certainly

a work of art, it is impossible to obtain again and again a precisely similar result, and we have no doubt that Messrs. Swift's twelfths will vary slightly in excellence. The present specimen, however, proves once and for all, that it is possible to make a $\frac{1}{12}$ Oil Immersion for five guineas, which for all practical purposes is quite equal to the finest foreign lenses, which are sold at five or six times the price.

OBITUARY.

WE regret to have to announce the death of Mr. George Beavis, L.D.S. Eng., which took place at Michigan U.S., on the 6th of November. Mr. Beavis who was a member of the Association, will be remembered by many of the old students of the Dental Hospital of London, who will be sorry to learn that so promising a career has been cut short at the early age of thirty-nine. That the sad event should have occurred while Mr. Beavis was studying at Michigan University, will be an additional cause of sorrow to many of his relatives and friends.

ANNOTATIONS.

IT is an inexplicable thing that despite all appeals in our annotation column, and notwithstanding the regular notices of the address to which matter should be sent, some of our correspondents persist in sending their matter to Messrs. Churchill, or to Leicester Square, and thereby causing a great deal of unnecessary trouble and expense, and moreover preventing their contributions from reaching us in time for publication. MSS. should be addressed to 11, Bedford Square, W.C.

THE DENTAL REGISTER, 1888.—Corrections and additions for the register should be sent in without delay. It is particularly requested that gentlemen who have recently qualified will register at once, in order that the new register may be correct to date of publication. In the case of alteration of address, notice should be sent to the Registrar, as many names are erased from the list in consequence of neglect in this particular.

LIST OF MEMBERS.—The new List of Members will be published early in the year. Corrections, either of qualifications or addresses, should reach the Hon. Secretary, Mr. Morton Smale, 40, Leicester Square, W.C., before December 31st. Complaints having reached the Executive as to the incorrectness of the present list, it is desired that the new one shall be correct, and it is therefore hoped that all members will comply with the above request.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—On the 2nd of November, at a meeting of the Board of Examiners for the diploma of Licentiate in Dental Surgery, consisting of John Wood, F.R.S., Jonathan Hutchinson, F.R.S., and J. W. Hulke, F.R.S. (on the surgical side), and A. Winterbottom, F.R.C.S., L.D.S., C. S. Tomes, F.R.S., L.D.S., and J. S. Turner, M.R.C.S., L.D.S. (on the dental side), the following gentlemen, having passed the necessary examination in Dental Surgery, were admitted Licentiates of the College.

Ackland, Robert, Southernhay, Exeter.

Badcock, John Henry, 108, Tottenham Court Road.

Colyer, James Frank, Hazeldene, Thurlow Park Road, West Dulwich.

Goard, Thomas Arthur, 2, Portland Square, Plymouth.

Jones, Albert Sydney, Bridge House, Stamford.

Kendall, William Henry, Chapel Street, Warwick.

Miller, Frederick Tayler, 106, Baron's Court Road, W. Kensington.

Morley, Charles Reginald, 9, London Road, Derby.

Picton, Henry, Annandale, Rossiter Road, Balham.

Saul, Barnett Bendet, Hereson, Ramsgate.

Smith, Arthur Hopewell, Lindon House, Boston, Lincolnshire.

Stoner, Harry John, 145, Western Road, Brighton.

Wakefield, Stanley Bennett, 1, Bevan Villas, Lower Richmond Road, Putney.

THE dinners of the Past and Present Students of our Dental Hospitals were more than ever successful this year. One of the pleasantest features at both was the presence of so many members of the staff of each Hospital at the social gathering of the other ; it was a very satisfactory sign of the advance of the times. The reappearance of the late Dean of the Hospital at Leicester Square, in his new ecclesiastical capacity, was a source of gratification to all his old friends, while no one can fail to have been struck by the wonderful vitality displayed by those old

veterans, who, in their younger days laid the foundations of our professional organisation, and still come among us to enjoy the spectacle of the triumphant success that has resulted from their early labours. As Mr. Tomes said, these social gatherings play as important a part in our history, as the more serious scientific meetings of the learned societies, and we hope they will long continue to do so. Our readers will notice that at both gatherings frequent allusions were made to the work that is being done by our Association. It is to be hoped that the students, who listened to the various able speeches on those occasions, will not forget the duty and responsibility that was so forcibly impressed upon them, of joining the Association as soon as they become qualified, and so doing their best to aid in the good work, by the result of which they so largely benefit.

THE members of the Dental Hospital Athletic Club, whose doings in the field were the subject of congratulatory notice in a recent number, gave a smoking concert to their friends and fellow students at Anderton's Hotel, on the 25th of last month. The Chair was taken by Mr. F. Canton, and among those present were Dr. Buxton, Messrs. Lloyd Williams, Latchmore, and the Dean. The programme consisted chiefly of songs, many of which were well sung. The vocal efforts were, however, varied by a violin solo by Mr. Latchmore, a pianoforte piece by Mr. Mackadams, and recitations by Mr. Darwin and Mr. Davids. It is somewhat invidious to make mention of particular vocalists, but we may perhaps say that the efforts of Messrs. Harding, Williams and Lang seemed to give especial satisfaction. We understand that the Hon. Sec. of the Club is anxious to receive the names of old students who may be willing to join. It is possible that this notice may be seen by some former students who cannot be more directly reached.

IN reply to our correspondent Mr. Waite, the figures to which he alludes giving the number of dentists practising in the various towns mentioned, were taken from local directories. The actual number on the register is doubtless greater, in fact, in Manchester and Liverpool, we are assured that the numbers we gave were more than a third less than they would have been had they been computed from the register. Many of these are no doubt chemists who are registered as dentists in conjunction with

pharmacy, their insertion would obviously have strengthened the conclusion which we drew, but the case was sufficiently strong as it stood. It is only fair to those cities that appear with a low average, to add that the number of practitioners eligible for membership as compared with the ineligible, is relatively much smaller in those cities that have a large poor population.

A CORRESPONDENT has called our attention to the fact that in the advertisement for a Dental Surgeon to the Hull Infirmary, it is made a *sine quâ non* that the candidate should possess a diploma from either London, Dublin or Edinburgh, and that the diploma given by the Faculty of Glasgow is not mentioned. This is very possibly an oversight—at least we should hope it will prove to be such; the Glasgow diploma stands so deservedly high in professional estimation that it is inconceivable that the authorities should wish to exclude those who hold it from candidature. In any case it is a matter for the Glasgow Faculty to examine into, and we have reason to believe that steps are being taken by that body to ascertain the facts of the case.

AMONG the names added to the Business Committee, to which is entrusted the practical carrying out of some of the most important work of the Association, our readers will find that of Mr. Leonard Matheson. Although Mr. Matheson is at present practising in London, and is therefore readily available for the meetings of the Committee, he has spent almost the whole of his professional life in Manchester, where he was in practice with Mr. Champion. His name is associated with the Midland Branch of the Association, and he may be reasonably supposed to be fully in touch with the provincial friends whom he has left behind him at Manchester, and in sympathy with the Branch for which he has so long been an active member.

On another page it is reported that the thanks of the Representative Board were tendered to the Irish College of Surgeons for its action with regard to those who have failed to obey the regulations of the College in reference to professional conduct. It must not be forgotten that the greatest praise is due to the Royal College of Surgeons in Ireland for their strict and impartial administration of their bye-laws. No corporate body has shown greater

energy in removing the names of those who, according to the rules of conduct laid down by the College, have acted unworthily and disgracefully. Their public spirit in taking up and carrying through these unpleasant cases may serve as a useful example to other licensing bodies.

THE Dental Hospital of London, Leicester Square, has received £1,000 from its Medical Staff and Lecturers towards the £5,000 required for the extension of the Hospital, rendered absolutely necessary in consequence of the large increase in the number of patients.

ON the 10th of this month, Professor Sylvester, F.R.S., brother of one of our members Mr. G. J. Sylvester, of Worcester, was awarded the De Morgan Memorial Medal of the London Mathematical Society, for valuable contributions to mathematical science.

THROUGH the oversight of the reporter, the name of Mr. W. Ladyman, of Liverpool, was unintentionally omitted from our report of the Lancaster meeting of the Midland Branch.

OWING to a misprint, the name of the Chairman at the recent meeting of the Irish Branch at Belfast, appeared as Richard Burnett, it should have been Richard Barnett.

THE first general meeting of the Irish Branch for the reading and discussion of papers, &c., took place on Saturday, December the 10th, at 4.30 p.m., at the same place.

WE are pleased to hear that fifteen new students have been admitted at the Glasgow Dental Hospital.

CORRESPONDENCE.

We do not hold ourselves responsible for the views expressed by our Correspondents.

The Lancaster Meeting.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—It appears to me that the use of mixed metaphors at the Lancaster meeting of the Midland Branch by the President of the meeting is not likely to lead us in the true direction of professional amity and organisation. I have carefully read the remarks of the promoters of the discussion, but fail to see any practical solution of the difficulty of ensuring a constant and regular attendance of provincial representatives at the Board meetings, even if the question of loss of time and expense were omitted as formidable obstacles towards such an end. So long as the head quarters of the British Dental Association remain in London, so long must the continuous and arduous work of the business transacted be entrusted to the men on the spot who are *able* and willing to do it. I have comparatively recently come in contact with the Representative Board, and, as a provincial man, I was much struck with the consideration and attention given to any sensible or practical ideas laid before the Board and I certainly could not observe any preponderance of London opinion. If by London opinion we are to speak of men who by their talent and energy have made their mark in the greatest city in the world, where all professions are represented by their best disciples, it cannot but be to our advantage to have it present on all occasions where it can be of use. If, on the other hand, it simply means the opinions of average practitioners in London, the result to our profession will not be advantageous.

Might I venture to point out to my provincial brethren that the question before us is not who first started reform, but rather how each member of our profession can now do his part to make it respected by the public, each doing his duty as a practitioner and a man to forward the consolidation and unity of our noble profession. So long as the business of the Association is worthily controlled and directed—so long as the Journal is intelligently conducted with broad and sympathetic views, suited to the wants of the members of the Association as a whole, so long will progress continue and the profession gain in dignity and influence.

I cannot believe that the Business Committee are likely to do anything unworthy of the trust reposed in them by the members of the BRITISH DENTAL ASSOCIATION, for so far as my experience and observation has extended, the members of the Committee seem anxious to be fully informed on all matters that can advance the interests of the Association. If, therefore (as is not unlikely), my provincial

brethren do not firmly and temperately place their views and wishes before the terrible London tribunal, they must only take advantage of whatever amount of intuition the Business Committee may possess. It is foolish to complain that certain views are not considered, if the views are never placed in evidence.

In conclusion let us hope that the Chester address will be forgotten as a wasted opportunity for drawing us all together in one common body, from the F. or M.R.C.S., down to the latest dental student registered under the Act, and that the Dublin meeting may be the means of uniting us heart and hand, in promoting the honour and the science of dentistry.

I am, Sir, yours most truly,

A NOVICE.

The Proportion of Dentists to Members of the Association.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—I am very much interested by the table given in your last leading article, with which you endeavour to show the proportion of dentists in several towns who have joined the British Dental Association.

Would you oblige me, and your other readers, by explaining how you arrive at the probable number of dentists in each place? You say, "We include as dentists all the 5,000 who are quoted by Mr. Waite." On that method, your figures absolutely refuse to surrender to any calculation or analysis of mine.

"Small errors," there may be, of course, but these do not remove the cloud. It is sometimes said that "figures can be made to prove anything," but before hurrying to a proof, or attempting a conclusion, it will be better to understand the data on which we proceed.

Yours very truly,

W. H. WAITE.

Dental Appointments at General Hospitals.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—In reply to "Anti-Cant," allow me to say this question of dental aid is not limited to garrison towns, and is not a question of the army and navy only, but one of how are we to alleviate, and help to stop the vast increasing suffering from dental disease. As for salaries, it is not thought that we would look for payment for advice, and aid, given at charitable institutions. That such ought to be given, I am convinced all sympathetic and benevolent members of our profession will grant. Ought we not to do in our day and generation, that for which we are most fitted, the work which is nearest our hands. Is it not our privilege that we can help greatly to allay the sufferings of the poor. Surely we are not to withhold our assistance, when all other branches of the medical profession give so freely to

the needy, their skill. This to my mind is our duty, far more than concerning ourselves about the many things ratepayers may look for in the way of sanitary measures, social reforms, &c.

With regard to the children in our Board Schools. It might be suggested that if a dentist were appointed to each, and the duties were to give instruction to the children regarding the care of their teeth, and advise such treatment as he thought needful, the child could then report at home what the dentist had said, or what would be better still, take home a card with the remarks written thereon. Parents, we should find, would not be slow to see the benefits of the dental advice thus given to their children, especially when they became educated to the fact, that it tended to the general good health and well being of their child. Neither can we estimate the influence these young folks would produce upon older members of the household.

That practitioners can talk about losing patients by giving a little of their services is astonishing ; the more, conservative treatment of the teeth is brought before the notice of the public, the more, the dentist's aid will be sought. By this means we should inculcate the need of cleanliness of the teeth at the proper age. The School Board dentist would then have opportunity of sending such cases as he thought proper to the Dental Hospital or dental department of the infirmary if such existed, and we may rest assured, none but worthy recipients would be sent. By this means we should, in a great measure, direct our own work into its proper groove ; and as these children learned to know the value of their teeth, they would not so easily fall into the hands of the unskilled quacks with whom we have so much to contend.

Let us be practical, and before we cry out let us have some reason to complain.

An infirmary and dispensary I have in mind appoints two dental surgeons, these gentlemen attend alternately ; the report of the dental work done last year shows a little over four hundred cases. Another neighbouring infirmary appoints one dentist who attends twice a week, the poor patients attending these institutions very often receive the *valuable services of pupils*. Where such a state of things as this is to be found, (the honorary dentist will not I am inclined to believe, suffer from an over strain of work for the poor.) If appointments are to be managed in this fashion, can one wonder at special hospitals being started, when men who are willing to serve the poor and the profession have no encouragement given them to share the work of these infirmary appointments.

Where both these are to be found in the same town, and are not utilized for educational purposes, it is to be regretted the two cannot amalgamate, as by such action a good dental department must be the result.

Yours truly,

December 2nd.

A. B. WOLFENDEN.

Stopping Mallets.

TO THE EDITOR OF THE "JOURNAL OF THE BRITISH DENTAL ASSOCIATION."

SIR,—The pneumatic mallet noticed in your issue of October, and to which Mr. Claude Rogers has given the sanction of his name, is without doubt the simplest form in which the instrument can be made, but I cannot see that it differs in any of its details from my original model which was modified for several reasons, but primarily because a better blow is obtained from a presser in the form of an oval plug. My present arrangement can be attached to the seat or arm of a chair, and is adjustable to any convenient height or position, it is operated by a thin soled stirrup, which allows the user's foot to rest flat upon the ground with the power of free lateral movement in any direction; the smallest rise or fall of the foot produces the necessary blow of such strength as the operator may desire. This arrangement (one of many), has not been made public, as another form had been put into Messrs. Ash's hands before it was perfected.

The pneumatic mallet, which is now employed for other than dental purposes, is most useful for introducing and consolidating soft gold fillings, but for cohesive gold filling the advantage of having a mallet operated by an assistant, or by some independent mechanical power is very considerable. For this purpose, probably nothing can excel a good form of electric mallet if a "constant" current can be relied upon, and this although difficult, may not be impossible. Amongst many other experiments, I have lately tried a very low resistance Daniel Cell, which is of course quite constant, and the form is arranged so that it can be easily charged.

For any one possessing an electro-motor, of course an engine mallet may be used, and as the motor can be used with a battery, which gives no trouble in charging, it is perhaps best to employ such an arrangement in preference to a special electro mallet.

I believe there are already two or three engine mallets in the market, and I have arranged a straight and an oblique angle form for use with the motor.

Yours, &c.,
AMOS KIRBY.

NOTE--ANONYMOUS letters directed to the Secretary of the Association cannot receive attention.

P.O. Orders must be accompanied by Letters of Advice.

Communications intended for the Editor should be addressed to him at 11, Bedford Square, W.C.

Subscriptions to the Treasurer, 40, Leicester Square.

All Contributions intended for publication in the Journal must be written on one side of the paper only. The latest date for receiving contributions for the current number is the 5th of the month.

